

United Republic of Tanzania

NATIONAL SAMPLE CENSUS OF AGRICULTURE
2002/2003

Volume V_k: REGIONAL REPORT: **IRINGA REGION**



Cattle Rearing



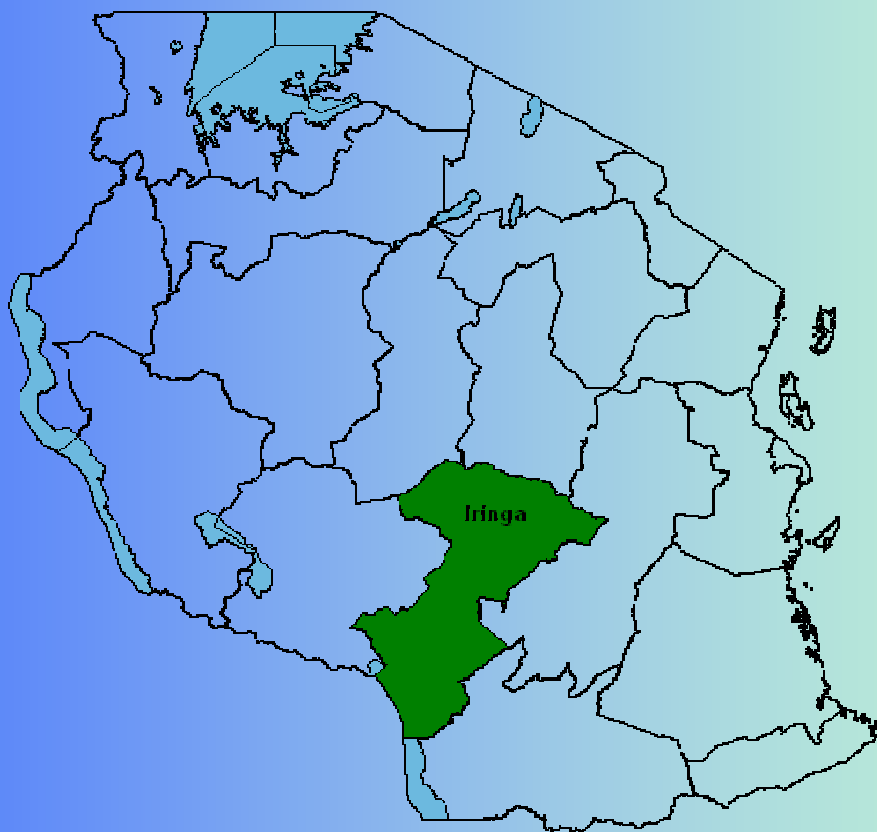
Fish Harvesting



Eggs Production



Maize Planting



Paddy Growing



Hand Cultivation



Indigenous Chicken



Irrigation Practice



Orange Marketing



Cassava Planting



Goat Rearing



United Republic of Tanzania



**NATIONAL SAMPLE CENSUS
OF AGRICULTURE
2002/2003**

VOLUME V_k: REGIONAL REPORT: IRINGA REGION

*National Bureau of Statistics, Ministry of agriculture and Food Security,
Ministry of Water and Livestock Development, Ministry of Cooperatives and Marketing,
Presidents Office, Regional Administration and Local Government,
Ministry of Finance and Economic Affairs – Zanzibar*

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ACRONYMS

<i>ASDP</i>	<i>Agricultural Sector Development Project</i>
<i>CSPro</i>	<i>Census and Survey Processing Program</i>
<i>DFID</i>	<i>Department For International Development</i>
<i>DIAS</i>	<i>District Integrated Agricultural Survey</i>
<i>DS</i>	<i>District Supervisor</i>
<i>EAS</i>	<i>Expanded Agricultural Survey</i>
<i>EAs</i>	<i>Enumeration Areas</i>
<i>EU</i>	<i>European Union</i>
<i>FE</i>	<i>Field Enumerator</i>
<i>GDP</i>	<i>Gross Domestic Product</i>
<i>Ha</i>	<i>Hectares</i>
<i>IAS</i>	<i>Integrated Agricultural Survey</i>
<i>ICR</i>	<i>Intelligent Character Recognition</i>
<i>IEC</i>	<i>Information, Education and Communication</i>
<i>JICA</i>	<i>Japanese International Cooperation Agency</i>
<i>LRS</i>	<i>Long Rainy Season,</i>
<i>MAFS</i>	<i>Ministry of Agriculture and Food Security</i>
<i>MCM</i>	<i>Ministry of Co-operatives and Marketing</i>
<i>MWLD</i>	<i>Ministry of Water and Livestock Development</i>
<i>NBS</i>	<i>National Bureau of Statistics</i>
<i>NGO</i>	<i>Non Governmental Organization</i>
<i>NMS</i>	<i>National Master Sample</i>
<i>NSCA</i>	<i>National Sample Census of Agriculture</i>
<i>NSGRP</i>	<i>National Strategy for Growth and Reduction of Poverty</i>
<i>PORALG</i>	<i>President's Office, Regional Administration and Local Government</i>
<i>PPS</i>	<i>Probability Proportional to Size</i>
<i>PSU</i>	<i>Primary Sampling Unit</i>
<i>RAAS</i>	<i>Rapid Appraisal Agricultural Survey</i>
<i>RS</i>	<i>Regional Supervisor</i>
<i>RSM</i>	<i>Regional Statistical Manager</i>
<i>SAC</i>	<i>Scotts Agriculture Consultancy Ltd</i>
<i>SPSS</i>	<i>Statistical Package for Social Science</i>
<i>SRS</i>	<i>Short Rainy Season</i>
<i>TOT</i>	<i>Training of Trainers</i>
<i>ULG</i>	<i>Ultek Laurence Gould</i>
<i>UNDP</i>	<i>United Nations Development Programme</i>
<i>UNFAO</i>	<i>United Nations Food and Agriculture Organization</i>
<i>VPO</i>	<i>Vice President Office</i>

PREFACE

At the end of the 2002/03 Agriculture Year, the National Bureau of Statistics and the Office of the Chief Government Statistician in Zanzibar in collaboration with the Ministries of Agriculture and Food Security; Water and Livestock Development; Cooperatives and Marketing as well as the Presidents Office, Regional Administration and Local Government (PORALG) conducted the Agriculture Sample Census. This is the third Agriculture Census to be carried out in Tanzania, the first one was conducted in 1971/72, the second in 1993/94 and 1994/95 (during 1993/94 data on household characteristics and livestock count were collected and data on crop area and production in 1994/95).

It is considered that this census is one of the largest to be carried out in Africa and indeed in many other countries of the world. The census collected detailed data on crop production, crop marketing, crop storage, livestock production, fish farming, tree farming, access to infrastructures and services and poverty indicators.

In addition to this, the census was large in its coverage as it provides data that can be disaggregated at district level and thus allow comparisons with the 1998/99 District Integrated Agricultural Survey. The census covered smallholders in rural areas only and large scale farms. This report presents Iringa region data disaggregated to district level. It was very difficult to discuss all variables collected in a single report hence the analysis was based on the most important smallholder variables. The rest of the variables are found in the attached annex of table of results. The analysis in the report includes time series comparisons using data from the previous censuses and surveys.

The extensive nature of the census in relation to its scope and coverage is a result of the increasing demand for more detailed information to assist in the proper planning of this sector and in the administrative decentralization of planning to district level. It is hoped that this report will provide new insights for planners, policy makers, researchers and others involved in the agricultural sector in order to improve the prevailing conditions faced by crop producers and livestock keepers in the country.

On behalf of the Government of Tanzania, I wish to express my appreciation for the financial support provided by the development partners, in particular, the European Union as well as DFID, UNDP, Japanese Government, JICA and others who contributed through the pool fund mechanism.

Finally, my appreciation goes to all those who in one-way or the other contributed to the success of the survey. In particular, I would also like to mention the enormous effort made by the Planning Group composed of professionals from the Agriculture Statistics Department of the National Bureau of Statistics (NBS), the Office of the Chief Government Statistician in Zanzibar (OCGS) and the Statistics Unit of the Ministry of Agriculture and Food Security (MAFS) with technical assistance provided by Ultec Lawrence Gould (ULG), Scotts Agriculture Consultancy Ltd and the Food and Agriculture Organisation of the United Nations (FAO).

Additionally, I would like to extend my appreciation to all professional staff of the National Bureau of Statistics, the sector Ministries of Agriculture and PORALG, the Consultants as well as Regional and District Supervisors and field enumerators for their commendable work. Certainly without their dedication, the census would not have been such a success.

Albina A. Chuwa
Director General
National Bureau of Statistics

EXECUTIVE SUMMARY

The executive summary highlights the main census results obtained during the National Sample Census of Agriculture 2002/03. This report covers small-scale agriculture households which were selected using statistical sampling techniques in rural areas of Iringa region. The results in the report do not cover urban areas and large-scale farms.

These highlights describe the important findings in relation to agricultural production, productivity, husbandry, access to resources, levels of involvement in agricultural related activities and poverty in Iringa region. It provides an overview of the rural agricultural households and their levels of involvement in agricultural related activities down to district level for Iringa region.

I) Household Characteristics

The number of agricultural households in Iringa region is 278,717 out of which 205,903 (73.9%) are involved in growing crops only and 72,814 (26.1%) are involved in crop production as well as livestock keeping. There are no agricultural households that were found either rearing livestock only or are pastoralists.

Most of the agricultural households ranked annual crop farming as the activity that provides most of their cash income followed by off farm income, tree/forest resources, livestock keeping/herding, permanent crop farming, remittances and fishing/hunting and gathering.

The region has a literacy rate of 76 percent. The highest literacy rate is in Mufindi district, followed by Ludewa (78.7%), Iringa Urban with (78.5%) and Njombe district (75%). Makete and Iringa Rural districts have the lowest literacy rates in the region with 69 and 72 percent respectively. The literacy rate for the heads of households in the region was 75 percent (85% for male heads and 50% for female heads)

The number of heads of agricultural households with formal education in Iringa region was 194,960 (70%), those without education were 74,540 (27%) and those with only adult education were 9,216 (3%). The majority of heads of agricultural households had primary level education (180,981 households, 65%) whereas only 1 percent of them had post primary education.

In Iringa region there were 129,318 household members (61%) were involved in one off-farm income generating activity, 62,793 households (30%) involved in two off-farm income generating activities and 19,912 households (9%) involved in more than two off-farm income generating activities.

II) Crop Production

▪ Land Area

The total area of land available to smallholders was 662,512 ha. The regional average land area utilised for crop production per crop growing household was 2.0 ha. This figure is equivalent to that of the national average of 2.0 hectares.

▪ Planted Area

The area planted with annual crops and vegetables in the wet season was 405,949 hectares of which 405,924 ha were planted in the wet season and 25 ha in the dry season. The area planted with cereals was the largest in the region with

280,850 ha, 69.9% of the total planted area with annual and vegetable crops), followed by pulses (70,498 ha, 17.5%), oil seeds, (24,718 ha, 6.1%), roots and tubers (19,924 ha, 5%), fruits and vegetables (5,625 ha, 1.4%) and annual cash crops 397 ha, 0.1%).

(II.i) Cereal crops

Maize

Maize is the dominant annual crop grown in Iringa region and it had a planted area 4.26 times greater than beans, which had the second largest planted area. The area planted with maize constitutes 63 percent of the total area planted with annual crops or 90 percent of the area planted with cereals. The total production of maize in 2002/03 was 265,945 tonnes. The average area planted with maize per household ranged from 0.62 hectares in Iringa Urban district to 1.24 hectares in Kilolo district. Njombe district had the largest planted area of maize (61,801 ha) followed by Mufindi (55,370 ha), Iringa Rural (50,332 ha), Kilolo (48,457 ha), Ludewa (20,710 ha), Makete (16,476 ha) and Iringa Urban (728 ha).

Wheat

Wheat is the second most important cereal crop in the region in terms of planted area. The number of households that grew wheat in Iringa region during the wet season was 35,524. This represents 13 percent of the total crop growing households in Iringa region in the wet season. The total production of wheat was 7,901 tonnes from a planted area of 16,223 hectares resulting in an average yield of 0.49 t/ha. The district with the largest area planted with wheat was Makete (7,923 ha), followed by Njombe (4,244 ha), Mufindi (1,954 ha), Ludewa (1,440 ha), Kilolo (564 ha) and Iringa Rural (97 ha).

Paddy

Paddy is the third most important cereal crop in the region in terms of planted area. The number of households that grew paddy in Iringa region during the wet season was 8,760. This represents 3 percent of the total crop growing households in Iringa region in the wet season. The total production of paddy was 8,099 tonnes from a planted area of 4,666 hectares resulting in an average yield of 1.74 t/ha. The district with the largest area planted with paddy was Iringa Rural (3,745 ha), followed by Ludewa (339 ha), Makete (304 ha), Njombe (174 ha) and Mufindi (104 ha). Kilolo and Iringa Urban districts did not grow any paddy.

Other Cereals

Other cereal crops grown in Iringa region were finger millet, sorghum, bulrush milled and barley. Barley was grown only in Makete District.

(II.ii) Roots and Tuber Crops Production

The total production of root and tuber crops was 81,890 tonnes from a planted area of 23,839 ha. Root and tuber crops that were grown in Iringa region include, Irish potatoes, cassava, sweet potatoes, yams and cocoyams.

Irish Potatoes

The area planted with Irish potatoes was larger than the area planted with any other root and tuber crop in Iringa region (11% of the total area planted with annual crops and vegetables) and it accounted for 76.3 percent of the area planted with roots and tubers. The total production of Irish potatoes was 72,865 tonnes representing 89 percent of the total root and

tuber crop production in the region. Njombe district has the largest area planted with Irish potatoes, followed by Makete and Mufindi, however they are not grown in Iringa Urban district.

▪ **Cassava**

The number of households growing cassava in the region was 11,204, representing 4 percent of the total crop growing households in the region. The total production of cassava during the census year was 7,124 tonnes from a planted area of 4,737 hectares resulting in a yield of 1.5 tons per hectare. Ludewa district had the largest planted area of cassava (3,605 ha, 76% of the cassava planted area in the region), followed by Iringa Rural (413 ha, 9%), Njombe (394 ha, 8%), Mufindi (222 ha, 5%), Kilolo (99 ha, 2%) and Iringa Urban (4 ha, 0.1%). Makete district did not grow any cassava. The average cassava planted area per cassava growing household was 0.4 hectares.

II.iii Pulse Crops Production

The total area planted with pulses was 70,483 hectares out of which 59,661 hectares were planted with beans, which amounted to 84.6% of the total area planted with pulses, followed by field peas (5,769 ha, 8.3%), cow peas (4,112 ha, 5.8%), bambaranuts (848 ha 1.20%), green gram (89 ha, 0.13%) and mung beans (4 ha, 0.01%). The total production of pulses was 30,640 tonnes. Beans were the most cultivated crop, producing 23,479 tonnes which accounted for 76.6 percent of the total pulse production. This was followed by field peas (5,851t, 19.10%), cow peas (934t, 3.05%) and bambaranuts (364t, 1.19%). Field peas and bambaranuts had a relatively higher yields of 1,010 and 429 kgs/ha respectively. The yields of the rest of the pulses in kilograms per hectare were beans (394 kgs/ha), cowpeas (227 kgs/ha) and green gram (117 kgs/ha).

II.iv) Oil Seed Production

The total production of oilseed crops was 10,526 tonnes from the planted area of 24,718 hectares. Sunflower was the most dominant oil seed crop with a planted area of 15,674 hectares (63% of the total area under oil seed crops), followed by groundnuts (7,650 ha, 31%), simsim (1,245 ha, 5%) and soya beans (148 ha, 1%). The yield of simsim was the largest (660 kg/ha), followed by sunflower (470 kg/ha), soya beans (362%) and groundnuts (299 kg/ha).

In terms of production, sunflower was the dominant oil seed crop with 7,366 tonnes which accounted for 70 percent of the total production of oil seeds, followed by groundnuts (22%), simsim (8%) and soya beans (0.5%).

II.v) Fruit and Vegetables

The total production of fruit and vegetables was 30,084 tonnes. The most cultivated fruit and vegetable crop was tomatoes, with a production of 18,991 tonnes, which accounts for 61 percent of the total fruit and vegetable production. This was followed by cabbage (9,098 tonnes, 18%) and onions (1,371 tonnes, 10%). The production of the other fruit and vegetable crops was relatively small.

II.vi) Cash Crops

A very small area of cash crops were grown in the region. A planted area of 397 ha in Iringa region was planted with annual cash crops mainly pyrethrum and tobacco. Pyrethrum was the most prominent annual cash crop in the region with a planted area of 336 ha (85% of the total area planted with annual cash crops in the region), followed by tobacco (61 ha, 15%).

11.vii) Permanent Crops

The smallholders planted area with permanent crops was 26,802 hectares which is 6 percent of the area planted with annual crops in the region. The most important permanent crop is banana which accounts for 36 percent of the total area planted with permanent crops, followed by mango (11%), pears (11%), coffee and pitches (8% each) and apples (7%). Other permanent crops are grown in small quantities.

II.viii) Input use

▪ Improved Seeds

The planted area using improved seeds was 85,835 ha which represents 21 percent of the total planted area with annual crops and vegetables. Cereals have the largest planted area with improved seeds (70% of the planted area with improved seeds in the region), followed by pulses (13%), roots and tubers (7%), oil seeds (5%), fruit and vegetables (4.8%) and cash crops (0.1%).

▪ Use of Fertilizers

The use of fertilisers on annual crops is relatively good with a planted area of 215,244 hectares (53.5% of the total planted area in the region). The planted area without fertiliser for annual crops was 190,680 hectares representing 46.9 percent of the total planted area with annual crops. Of the planted area with fertiliser application, inorganic fertilizers was applied to 102,596 hectares which represents 25.3 percent of the total planted area in the region (or 47.7% of the area planted with fertiliser application in the region). This was followed by farm yard manure (93,635 ha, 43.5% of the area planted with fertiliser application in the region) and compost manure with 19,013 hectares (8.8 of the area planted with fertiliser application in the region).

▪ Use of Pesticides

In Iringa region, pesticides were applied to a planted area of 208,377 hectares of annual crops and vegetables. Insecticides were the most common pesticides used in the region with 84.1 percent of the total area applied with pesticides in the region. This was followed by fungicides (10.7%) and herbicides (5.2%).

▪ Irrigation

In Iringa region, the area of annual crops under irrigation was 67,833 hectares representing 17 percent of the total area planted with annual crops and vegetables. Njombe had the largest planted area with irrigation (24.2% of the total planted area with irrigation in the region), followed by Iringa Rural (21.2%), Ludewa (18.4%), Mufindi (18.2%), Kilolo (17.3%), Makete (0.5%) and Iringa Urban (0.1%).

II.ix) Crop Storage

There were 259,527 crop growing households (93% of the total crop growing households) that stored various agricultural products in the region.

The most important stored crop was maize with 251,696 households storing 86,901 tonnes as of 1st January 2004. This was followed by beans and other Pulses (136,641 households, 7,310 ton), Paddy (5,218 households, 1,594 ton) and groundnuts and bambara nuts (6,381 households, 3104 ton). Other crops were stored in very small amounts. The most common method of storage was in sacks/open drums.

II.ix) Agro- processing

Agro processing is practiced in most agriculture households in Iringa region (272,110 households, 98% of the total crop growing households in the region). The most commonly used method of processing was using neighbours machines with 83.6 percent of the crop processing households using the method.

II.x) Crop Marketing

The number of households that reported selling crops was 191,085 which represent 68.6 percent of the total number of crop growing households. The percent of crop growing households selling crops was highest in Makete (81%) followed by Njombe (80.3%), Kilolo (78.1%), Ludewa (67.3%), Mufindi (55.6%) Iringa Rural (51.5%) and Iringa Urban (33.3%).

II.xi) Agricultural Credit

Iringa region had very few agricultural households (9,046, 3.2%) that accessed credit and most of them are found in Makete district. The most common source of credit in the region was from family friends and relatives.

II.xii) Crop Extension Services

The number of Agricultural households that received crop extension was estimated at 179,297 accounting for 64 percent of total crop growing households in the region. Some districts have more access to extension services than others. Kilolo had a relatively high proportion of households that received crop extension messages (84% percent of the households in the district), followed by Makete (82%), Iringa Rural (79%), Iringa Urban (57%), Njombe (51%), Ludewa (44%) and Mufindi (27%).

II. xiii) Tree Planting

The number of households involved in tree farming was 71,531 representing 26 percent of the total number of agriculture households. The number of trees planted by smallholders on their allocated land was 46,922,422 trees. The average number of trees planted per household that plant trees on their land was 656 trees.

Makete has the largest number of smallholders with planted trees than any other district in Iringa region (36%). This is followed by Mufindi (18%) and Kilolo (16%). The dominant species in Iringa region is Pinnes Spp and to a lesser extent Eucalyptus Spp and Cyprus Spp. Most trees are grown in plantations.

II.xiv) Soil Erosion and Water Harvesting Facilities

The number of agricultural households that reported the presence of soil erosion and water harvesting facilities on their farms was 59,034 which represent 21 percent of the total number of agricultural households in the region. The proportion of households with soil erosion control and water harvesting facilities was highest in Kilolo district (38%), followed by Njombe (25%), Iringa Urban (24.5%), Makete (24%), Ludewa (18%), Iringa Rural (14%) and Mufindi (12%).

III) Livestock and Poultry Production

▪ Cattle

The total number of cattle in the region was 420,954. Cattle is the dominant livestock type in the region, followed by goats, sheep and pigs. The region had 2.5 percent of the total cattle population on Tanzania Mainland. The number of indigenous cattle in Iringa region was 401,773 (95.4 % of the total number of cattle in the region) whilst improved dairy cattle were 17,522 (4.2%) and improved beef cattle were 1,659 (0.4%). The average number of cattle per households was 8. The

district with the largest number of cattle was Makete which had about 153,347 cattle (36.4% of the total cattle in the region).

- **Goats**

The number of goat-rearing-households in Iringa region was 41,706 (15% of all agricultural households in the region) with a total of 327,476 goats giving an average of 8 head of goats per goat-rearing-household. Most of the goats were found in Mufindi.

- **Sheep**

The number of sheep-rearing households was 11,716 (4% of all agricultural households in Iringa region) rearing 67,424 sheep, giving an average of 6 heads of sheep per sheep-rearing household. Makete had the largest number of sheep in the region (45% of the total sheep in the region), followed by Iringa Rural (24%), Ludewa (9%), Mufindi (9%), Kilolo (8%), Njombe (5%) and Iringa Urban (1%).

- **Pigs**

The number of pig-rearing agricultural households in Iringa region was 67,979 (24.4% of the total agricultural households in the region) rearing 180,904 pigs. This gives an average of 3 pigs per pig-rearing household. Most of the pigs are found in Mufindi (35.7% of the total pigs in the region), followed by Makete (24.5%), Kilolo (14.9%), Njombe (12.5%), Iringa Rural (9.6%), Ludewa (2.7%) and Iringa Urban (0.2%).

- **Chicken**

The number of households keeping chicken was 200,117 raising about 2,241,683 chickens, most of which were indigenous. This gives an average of 11 chickens per chicken-rearing household. Mufindi district had the largest number of chicken followed by Njombe. In terms of total number of chickens in the country, Iringa region was ranked fifth out of the 21 Mainland regions.

- **Pests and Parasites**

Ticks and tsetse-fly problems were encountered by 57 percent and 15 percent of the total livestock-keeping households in Iringa region. The results show that there was a predominance of tick related diseases over tsetse related diseases. Incidences of both problems were highest in Iringa Urban district but lowest in Iringa Rural.

- **Use of Draft Power**

The region had 145,215 draft animals that cultivated 132,118 hectares. The largest area cultivated using draft animals was found in Makete district (51,937 ha, 39.3% of the total area cultivated using oxen) and this was followed by Kilolo (27,729 ha, 21%), Mufindi (27,596 ha, 20.9%), Iringa Rural (18,537 ha, 14%), Njombe (5,901 ha, 4.5%), Ludewa (332 ha, 0.3%) and Iringa Urban (87 ha, 0.1).

- **Fish Farming**

The number of households involved in fish farming in Iringa region was 3,293 representing 1.2 percent of the total agricultural households in the region. Mufindi was the leading district with 1,285 households (39% of agricultural households) involved in fish farming. This was followed by Kilolo (961 households, 29%), Ludewa (603 households, 18%), Njombe (258 households, 8%) and Makete (186 households, 6%). Fish farming was not practiced in two districts of Iringa Rural and Iringa Urban.

IV) Poverty Indicators

▪ Availability of Toilets

Most rural agricultural households in Iringa region use traditional pit latrines (263,860 households, 94% of all rural agricultural households in the region). This is followed by flush toilet households (8,619 household, 3%) and improved latrine pit (4,230 households, 2%). The remaining 2,008 household (1%) had no toilet facilities. Iringa Rural district has the largest number of households with no toilet facilities.

▪ Household Assets

Out of all assets, radios are owned by most rural agricultural households (49.86% of all agricultural households in the region), followed by bicycle (37.2%), iron (25.3%), wheelbarrow (6.4%), mobile phone (1.7%), television/video (1.2%), vehicle (1.0%) and landline phone (0.07%).

▪ Source of Lighting Energy

Hurricane Lamp was the most common source of lighting energy in the region, with 47.5 percent of the total rural households using the source, followed by wick lamps (45.8%), pressure lamps (3.3%), mains electricity (1.5%), firewood (1.4%), solar (0.4%), gas or biogas and candle (0.1% each) and “other” (0.02%).

▪ Energy for Cooking

The most prevalent source of energy for cooking was firewood, which was used by 99 percent of all rural agricultural households in Iringa region. This is followed by charcoal (1%). The rest of energy sources accounted for 0.84 percent. These were cop residues (0.34%), bottled Gas (0.21%), mains electricity (0.12%), Solar (0.09%), Livestock dung and (0.04%).

▪ Roofing Materials

The most frequently used roofing material (for the main dwelling) was iron sheets (46.2% of the total rural agricultural households), followed closely by grass and/or leaves (44.8%). Other roofing materials included grass/mud (7.8%), tiles (0.7%), asbestos (0.3%), concrete (0.2%) and “others” (0.1%).

▪ Source of Drinking Water

The main source of drinking water for rural agricultural households in Iringa region was pipe water with 33 percent of households using it as the main source during the wet season and 32 percent of the households during the dry seasons.

▪ Food Consumption Patterns

The majority of households in Iringa region normally have 2 meals per day (60% of the rural households in the region), 37 percent normally take 3 meals per day and 2 percent take only 1 meal per day. Very few households take four meals per day (0.04%).

About 74 percent of the total agricultural households (206,621 households) in Iringa region consumed meat during the week preceding the census, out of which 113,662 households (55% of those who consumed meat that week) consumed meat only once. This was followed by those who had meat twice (30%). Very few households had meat three or more

times during the respective week. However, 25.9 percent of the agricultural households in Iringa region did not eat meat during the week preceding the census.

About 57 percent of agricultural households in Iringa region consumed fish during the week preceding the census (158,464 households) with 95,403 households (60.2 % of those who consumed fish during that week) consuming fish once. This was followed by those who had fish twice during that week. However, 43.1 percent of the agricultural households in Iringa region did not eat fish during the week preceding the census.

▪ **Food Security**

In Iringa region, 61,523 households (22% of the total agricultural households in the region) said they rarely experienced problems in satisfying the household food requirements, whilst 19,404 households (7%) said they sometimes experience problems. However, 6 percent of agricultural households in Iringa region often experienced problems in satisfying their food needs and 4 percent of them said they always had problems. About 61 percent of the agricultural households said they did not experience any food sufficiency problems.

▪ **Main Source of Cash Income**

Selling of food crops was the main cash income earning activity reported by 46.7 percent of all rural agricultural households in Iringa region, followed by casual labour (17.8%), businesses (13.2%), wages and salaries (5.7%) and cash remittances (5.5%). Other income earning activities accounted for 10.9 percent and these were cash crops (3.7%), forest products (2.5%), “other” (2%), livestock (1.7%), fishing (0.5%), and livestock products (0.5%).

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1.1 Introduction

This part of the report presents a brief description of Iringa region by providing information on geographical location, land area, climate, administrative setup and key socioeconomic indicators. The information will provide the user with a general understanding of the region and its resources.

1.2 Geographical Location

Iringa region lies in the Southern Highlands of Mainland Tanzania. It stretches from the semi-arid central Tanzania in the north to the shores of Lake Nyasa in the South. The region is located between 7°05' - 36°32' South and 33°47' - 36°32' East. In the North, Iringa region borders Dodoma region, Mbeya region to the West and Morogoro region to the East. To the South, Iringa region partly borders Ruvuma region and partly the Lake Nyasa.

The region lies between latitudes 7° and 9° south of Equator, and between longitudes 32° and 35° East of the Greenwich Meridian. Iringa region lies at an altitude of 475 metres above sea level with high peaks of 2,981 metres above level.

1.3 Regional Area and Administrative Units

The region covers an area of 58,936 sq. kms. About seventy-three percent of the area is arable. The Region is formed by six administrative districts namely Iringa rural, Mufindi, Njombe, Ludewa, Makete and Iringa urban with Iringa Municipal council as their headquarters.

1.4 Climate

Most parts of the region experience temperatures below 15°C for a great part of the year. However, in few instances, temperatures do rise up to 25°C in the Midlands.

The rainfall in the region is typical of unimodal type with a single rainy season (Masika) from November through May, and dry conditions during the rest of the year. The amount of rainfall ranges from 500 mm to more than 1,600 mm per year.

1.5 Population Size and Growth

According to the projections that are based on the 1988 population census, the population of Iringa region by the year 2002 was 1,495,333 people. It is among the moderately populated regions with 4.5 percent of the Tanzania Mainland population.

1.6 Regional Economy

The region's main economic activities are agricultural production, livestock rearing and fishing. The main cash crops in the region are tobacco, tea, pyrethrum, sunflower and coffee. Oil crops are also planted in the region.

In general, agriculture in Iringa region is the major economic activity of the people, on average agriculture contributes more than 85% of the region's GDP and employs more than 90% of the regional population.

As of 1998, the regional GDP and per capita GDP at current prices was TShs. 287,035/= million and TShs. 184,010/= respectively. The regional per capita GDP was above the Tanzania Mainland per capita GDP, which was TShs. 170,733/= . In terms of regional average annual contribution to the National GDP, Iringa region's contribution was 5.6%. This makes the region be ranked sixth in terms of its contribution to the National GDP.

1.7 Tourism

Iringa like few other regions is bestowed with wildlife potential. It has two national parks namely Ruaha and Udzungwa. In addition, the region has two game reserves, which are Lunda/Mkwambi and Kihongosa.

1.8 Industrial Activities

Most rural farmers participate in activities that are related to small-scale industries such as carpentry, weaving, pottery, brick making, skin/hides etc. Potential businessmen are the key players in medium and large-scale industries as they are capital intensive.

1.9 Economic Infrastructure

There is a total of 6 675 kms of road network in the region, which includes Trunk roads, Regional roads, District roads and Feeder roads. Of these, the tarmac roads cover only 477.3 kms. Feeder roads, which are true life arteries of the economy, are not very good, especially during rainy season.

Apart from road network, the famous TAZARA line runs from Dar es Salaam through the region via Mbeya to Zambia. Also, the region is served by three main air strips namely Nduli, Njombe and Mafinga.

There are also other communication networks in the region like postal, telephone, telex, and fax services.

2.0. INTRODUCTION

This part of the report provides the technical and operational description of the National Sample Census of Agriculture (NSCA), carried out in the rural areas of Tanzania Mainland and Zanzibar during the 2002/03 agricultural year. It details the background and the rationale for carrying out the NSCA in 2002/03 agricultural year. It also explains the sampling procedures, designing and implementation of the data processing system.

2.1 The Rationale for Conducting the National Sample Census of Agriculture

In 2003, the Government of Tanzania launched the Agricultural Sample Census as an important part of the Poverty Monitoring Master Plan which supports the production of statistics for advocacy of effective public policy, including poverty reduction, access to services, gender, as well as the standard crop production data normally collected in an agriculture census. The census is intended to fill the information gap and support planning and policy formulation by high level decision making bodies. It is also meant to provide critical benchmark data for monitoring Agriculture Sector Development Programme (ASDP) and other agriculture and rural development programs as well as prioritising specific interventions of most agriculture and rural development programs.

Following the decentralisation of the Government's administration and planning functions, there has been a pressing need for agriculture and rural development data disaggregated at regional and district levels. The provision of district level estimates will provide essential baseline information on the state of agriculture and support decision making by the Local Government Authorities in the design of District Agricultural Development and Investment Projects (DADIPS). The increase in investment is an essential element in the national strategy for growth and reduction of poverty.

This report (Volume V) is among the 21 regional reports for the mainland. Other Census reports include the Technical Report (Volume I), crop sector at national and regional levels including Zanzibar estimates (Volume II), Livestock Report (Volume III), Smallholder Household Characteristics and Access to Natural Resources Report (Volume IV), 21 Regional Reports for the Mainland (Volume V), Large Scale Farms Report (Volume VI) and a separate report for Zanzibar (Volume VII). In order to address the specific issue of gender, a separate thematic report on gender has been published. Other thematic reports will be produced depending on the demand and availability of funds. In addition to these reports two dissemination applications have been produced to allow users to create their own tabulations, charts and maps.

The report is divided into five main sections: Background Information, Introduction, Results, Evaluation and Conclusion and Appendices. The definitions relating to all aspects of this report can be found in the questionnaire (Appendix III).

2.2 Census Objectives

The 2003 Agriculture Sample Census was designed to meet the data needs of a wide range of users down to district level including policy makers at local, regional and national levels, rural development agencies, funding institutions, researchers, Non government Organisations (NGOs), farmer organisations, etc. As a result, the dataset is both more numerous in its sample and detailed in its scope compared to previous censuses and surveys. To date this is the most detailed Agricultural Census carried out in Africa. The census was carried out in order to:

Identify structural changes if any, in the size of farm household holdings, crop and livestock production, farm input and implement use. It also seeks to determine if there are any improvements in rural infrastructure and in the level of agriculture household living conditions;

Provide benchmark data on productivity, production and agricultural practices in relation to policies and interventions promoted by the Ministry of Agriculture and Food Security and other stake holders.

Establish baseline data for the measurement of the impact of high level objectives of the Agriculture Sector Development Programme (ASDP), National Strategy for Growth and Reduction of Poverty (NSGRP) and other rural development programs and projects.

Obtain benchmark data that will be used to address specific issues such as: food security, rural poverty, gender, agro-processing, marketing, service delivery, etc.

2.3 Census Coverage and Scope

The census was conducted for both large and small scale farms. The National Sample Census of Agriculture covered a total of 3,221 selected rural villages of Tanzania Mainland out of which 215 villages were from Iringa region.

The census covered agriculture in detail as well as many other aspects of rural development and was conducted using three types of questionnaires:

- Small scale farm questionnaire
- Community level questionnaire
- Large scale farm questionnaire

The small scale farm questionnaire was the main census instrument and it includes questions related to crop and livestock production and practices; population demographics; access to services, resources and infrastructure; issues on poverty, gender and subsistence versus profit making production units. The main sections covered are as follows:

Identification (i.e. region, district, ward and village)

Household and holding characteristics

Household information

Land ownership/tenure

Land use

Access and use of resources

Crop and vegetable production

Agro processing and by-Products

Crop storage and marketing

On-farm investment

Access to farm inputs and implements

Use of credit for agricultural purposes

Tree farming/agro-forestry

Crop extension services

Livelihood constraints

Animal contribution to crop production

Livestock

- Livestock products
- Fish farming
- Livestock extension
- Labour use
- Access to infrastructure and other services
- Household facilities

The community level questionnaire was designed to collect village level data such as access and use of common resources, community tree plantation and seasonal farm gate prices.

The large scale farm questionnaire was administered to large scale farms that were either privately or corporately managed. There will be a national report on large scale farming on Tanzania Mainland.

2.4 Legal Authority of the National Sample Census of Agriculture

The NSCA 2002/03 was conducted under the legal authority of the 2000 National Bureau of Statistics Act which, among other things, makes data collected from individuals strictly confidential and to be used for statistical purposes only.

2.5 Reference Period

Two types of reference periods were used namely the agricultural year and the reference date for livestock enumeration. The agricultural year 2002/03 (that is October 2002 to September 2003) was used for the data items that are related to crop production. The reference date of enumeration for livestock and poultry count was 1st October 2003.

2.6 Census Methodology

The main focus at all stages of the census execution was on data quality and this is emphasised in this section. The main activities undertaken include:

- Census organisation
- Tabulation plan preparation
- Sample design
- Design of census questionnaires and other instruments.
- Field pre-testing of the census instruments
- Training of trainers, supervisors and enumerators
- Information Education and Communication (IEC) campaign
- Data Collection
- Field supervision and consistency checks
- Data processing:
 - Scanning
 - ICR extraction of data
 - Structure formatting application
 - Batch validation application
 - Manual data entry application
 - Tabulation preparation using SPSS
- Table formatting and charts using Excel, map generation using ArcView and Freehand.
- Report preparation using Word and Excel.

2.6.1 Census Organization

The Census was conducted by the National Bureau of Statistics in collaboration with the sector ministries of agriculture, and the Office of the Chief Government Statistician in Zanzibar. At the national level the Census was headed by the Director General of the National Bureau of Statistics with assistance from the Director of Economic Statistics. The Planning Group, made up of staff from the National Bureau of Statistics, Department of Agricultural Statistics and three representatives from the Ministry of Agriculture and Food Security (Department of Policy and Planning), oversaw the overall operational aspects of the Census. At the regional level, implementation of census activities was overseen by the Regional Statistical Officer of NBS and the Regional Agriculture Supervisor from the Ministry of Agriculture and Food Security. At the District level, two supervisors from the President's Office, Regional Administration and Local Government (PORALG), managed the enumerators who also came from the same ministry.

Members of the Planning Group had a minimum qualification of a bachelor degree, the regional supervisors were either agricultural economists, statisticians or statistical officers. The district supervisors and enumerators had diploma level qualifications in agriculture.

The Census and Surveys Technical Working Group provided support in sourcing financing, approving budget allocations and technical assistance inputs as well as monitoring the progress of the census. A Technical Committee for the census was established with members from key stakeholder organisations (i.e. NBS, sector ministries of agriculture, President's Office, Planning and Privatization (POPP), PORALG, University of Dar es Salaam (UDSM), Tanzania Food and Nutrition Centre (TFNC) and the Office of Chief Government Statistician (OCGS) in Zanzibar). The main function of the committee was to approve the proposed instruments and procedures developed by the Planning Group. It also approved the tabulations and analytical reports prepared from the Census data.

2.6.2 Tabulation Plan

The tabulation plan was developed following three user group workshops and thus reflects the information needs of the end users. It took into consideration the tabulations from previous census and surveys to allow trend analysis and comparisons.

2.6.3 Sample Design

The Mainland sample consisted of 3,221 villages. These villages were drawn from the National Master Sample (NMS) developed by the National Bureau of Statistics (NBS) to serve as a national framework for the conduct of household based surveys in the country. The National Master Sample was developed from the 2002 Population and Housing Census. In most cases, within each selected village, data was collected from a sub-sample of fifteen agricultural households. In few large villages thirty households were selected. The total Mainland sample was 48,315 agricultural households. In Zanzibar a total of 317 EAs were selected and 4,755 agricultural households were covered. Nationwide, all regions and districts were sampled with the exception of three urban districts (two from Mainland and one from Zanzibar).

In both Mainland and Zanzibar a stratified two stage sample was used. In the first stage, villages/enumeration areas (EAs) were selected with probability proportional to the number of villages in each district. In the second stage, 15 households were selected from a list of farming households in each Village/EA using systematic random sampling. Table 2.1 gives the sample size of households, villages and districts for Tanzania Mainland and Zanzibar.

Table 2.1: Census Sample Size

Number of	Mainland	Zanzibar	Total
Households	48,315	4,755	53,070
Villages/Eas	3,221	317	3,539
Districts	117	9	126
Regions	21	5	26

2.6.4 Questionnaire Design and Other Census Instruments

The census questionnaires were designed following user/producer meetings to ensure that the information collected was in line with their data needs. Several features were incorporated into the design of the questionnaire to increase the accuracy of the data:

Where feasible all variables were extensively coded to reduce post enumeration coding error.

The definitions for each section were printed on the opposite page so that the enumerator could easily refer to the instructions whilst interviewing the farmer.

The responses to all questions were placed in boxes printed on the questionnaire, with one box per character. This feature made it possible to use scanning and ICR technologies for data entry.

Skip patterns were used to avoid asking unnecessary questions

Each section was clearly numbered, which facilitated the use of skip patterns and provided a reference for data type coding for the programming of CPro, SPSS and the dissemination applications.

Besides the questionnaires, there were other instruments used:

Village listing forms that were used for listing households in the villages and from these list a systematic sample of 15 agricultural households were selected from each village.

Training manual which was used by the trainers for the cascade/pyramid training of supervisors and enumerators. This manual was trainers guiding document on the procedures to follow during the training

Enumerator Instruction Manual which was used as reference material.

2.6.5 Field Pre-Testing of the Census Instruments

The Questionnaire was pre-tested in five locations (Arusha, Dodoma, Iringa, Unga and Pemba). This was done purposely to test the wording, flow and relevance of the questions and to finalise crop lists, questionnaire coding and manuals. In addition to this, several data collection methodologies had to be finalised, namely, livestock numbers in pastoralist communities, cut flower production, mixed cropping, use of percentages in the questionnaire and finalising skip patterns and documenting consistency checks.

2.6.6 Training of Trainers, Supervisors and Enumerators

Cascade/pyramid training techniques were employed to maintain statistical standards. The top level training was provided to 66 national and regional supervisors (3 per region plus Zanzibar). The trainers were members of the Planning Group and the trainees were from the National Bureau of Statistics and the sector ministries of agriculture. The second level training was for the district supervisors and enumerators. This training was conducted in the regions. In each region three training sessions were conducted for the district supervisors and enumerators. In addition to training in field level Census methodology and definitions, emphasis was placed on training the enumerators and supervisors in consistency checking. Tests were given to the enumerators and supervisors and the best 50 percent of the trainees were selected to administer the smallholder and community level questionnaires. This increased the number of interviews per enumerator but it also released finance to increase the number of supervisors and hence the Supervisor Enumerator Ratio. The household listing exercise was carried out by all trained enumerators.

2.6.7 Information, Education and Communication (IEC) Campaign

Information, Education and Communication (IEC) is an important aspect of any census/survey undertaking. This is due to the fact that inadequately informed and hence uncooperative citizens may jeopardize the entire census/survey. As far as the 2002/03 Agricultural Sample Census was concerned, the main objective of the IEC program was to sensitize and mobilize Tanzanians to support, cooperate and participate in the census exercise.

Radio, television, newspapers, leaflets, t-shirts and caps were used to publicise the Sample Census. T-shirts and caps were used by the field staff and the village chairmen as official uniforms during the field work. The village chairmen helped to locate the selected households.

2.6.8 Household Listing

The household listing exercise was done in seven days. During the listing exercise, forms ACLF1 and ACLF2 were administered. The information collected included the number of fields operated by the household, the number of different types of livestock and poultry. This information was used to determine the agricultural households. From the list of agricultural households, 15 households were selected for the interview. The selection was done using the Random Number Table.

2.6.9 Data Collection

Data collection activities for the 2002/2003 Agricultural Sample Census took three months from January to March 2004. The data collection methods used during the census were by interview and no physical measurements, e.g., crop cutting and field area measurement were taken. Field work was monitored by a hierarchical system of supervisors at the top of which was the Mobile Response Team followed by the national, regional, and district supervisors.

The Mobile Response Team consisted of three principal supervisors who provided overall direction to the field operation and responded to queries arising outside the scope of the training exercise. The mobile response team consisted of the Manager of Agriculture Statistics Department, Long-term Consultant and Desk Officer for the Census. Decisions made on definitions and procedures were then communicated back to all enumerators via the national, regional and district supervisors.

District supervision and enumeration were done by staff from the President's Office, Regional Administration and Local Government (PORALG). National and regional supervisions were provided by senior staff of the National Bureau of Statistics and the sector ministries of agriculture. During the household listing exercise 3,221 extension staff were used. For the enumeration of the small holder questionnaire, 1,611 enumerators were used and additional 5 percent enumerators were held in reserve in case of drop outs during the enumeration exercise.

2.6.10 Field Supervision and Consistency Checks

Enumerators were trained to probe the respondents until they were satisfied with the responses given before they recorded them in the questionnaire. The first check of the questionnaires was done by enumerators in the field during enumeration. The second check was done by the district supervisors followed by regional and national supervisors. Supervisory visits at all levels of supervision focused on consistency checking of the questionnaires. Inconsistencies encountered were corrected, and where necessary a return visit to the respondent was made by the enumerator to obtain the correct

information. Further quality control checks were made through a major post enumeration checking exercise where all questionnaires were checked for consistencies by all supervisors in the district offices.

2.6.11 Data Processing

Data processing consisted of the following processes:

- Manual editing
- Data entry
- Data structure formatting
- Batch validation
- Tabulation
- Illustration production
- Report formatting

Manual Editing

Prior to scanning, all questionnaires underwent a manual cleaning exercise. This involved checking that the questionnaire had a full set of pages, correct identification and good handwriting. A score was given to each questionnaire based on the legibility and the completeness of enumeration. This score will be used to assess the quality of enumeration and supervision in order to select the best field staff for future censuses/surveys.

Data entry/Scanning and ICR extraction technologies

Scanning and ICR data capture technology was used for the small holder questionnaire. This not only increased the speed of data entry, it also increased the accuracy due to the reduction in keystroke errors. Interactive validation routines were incorporated into the ICR software to track errors during the verification process. The scanning operation was so successful that it is highly recommended that this technology be adopted for future censuses/surveys.

The Census and Surveys Processing Program (CSPro) was used to enter 2,880 of small holder questionnaires that were rejected by the Intelligent Character Recognition (ICR) extraction application.

Data structure formatting

A program was developed in visual basic to automatically alter the structure of the output from the scanning/extraction process in order to harmonise it with the manually entered data. The program automatically checked and changed the number of digits for each variable, the record type code, the number of questionnaires in the village, the consistency of the Village Identification (ID) code and saved the data of one village in a file named after the village code.

Batch validation

A batch validation program was developed in order to identify inconsistencies within a questionnaire. This is in addition to the interactive validation during the ICR extraction process. The procedures varied from simple range checking within each variable to more complex checking between variables. It took six months to screen, edit and validate the data from the smallholder questionnaire. After the long process of data cleaning, the results were prepared based on a pre-designed tabulation plan.

Tabulations

Statistical Package for Social Sciences (SPSS) was used to produce the Census results and Microsoft Excel was used to organize the tables and compute additional indicators.

Analysis and report preparation

The analysis in this report focuses on regional and district production estimates, districts comparisons and time series analysis. Microsoft Excel was used to produce charts; whereas Microsoft Word was used to compile the report.

Data quality

A great deal of emphasis was placed on data quality throughout the whole exercise from planning, questionnaire design, training, supervision, data entry, validation and cleaning/editing. As a result of this NBS believes that the Census is highly accurate and representative of what was experienced at field level during the Census year. With very few exceptions the variables in the questionnaire are within the norms for Tanzania and they follow expected time series trends when compared to historical data. Standard Errors and Coefficients of Variation for the main variables can be found in the Technical Report (Volume I).

2.7 Funding Arrangements

The Agricultural Sample Census was supported mainly by the European Union (EU) who financed most of the operational activities. Other funds for operational activities came from the Government of Tanzania, Government of Japan, United Nations Development Programme (UNDP) and other partners in the Pool Fund of the Vice President's Office (VPO). In addition to this, technical assistance was provided by the European Union (EU), Department for International Development (DFID) and Japanese International Cooperation Agency (JICA). Technical assistances were managed by Ultek Laurence Gould Consultants (ULG), Scotts Agriculture Consultancy Ltd (SAC) and the Food and Agriculture Organisation (FAO).

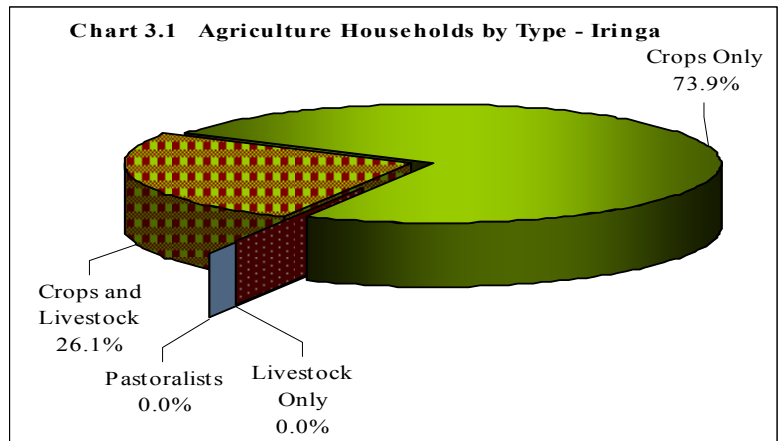
3. CENSUS RESULTS

This part of the report presents the results of the census data for Iringa region which are based on the data tables presented in Appendix AII. The results are presented in different forms including brief summaries, charts, condensed tables, graphs and maps in order to make it easier for the users to understand. Comparisons are made between related variables and between districts. Comparisons are also made with past censuses/surveys results such as the 1994/95 National Sample Census of Agriculture (NSCA), the 1995/96 and the 1996/97 Expanded Agricultural Surveys, the 1997/98 Integrated Agricultural Survey, the 1998/99 District Integrated Agricultural Survey and the 1999/00 Rapid Agricultural Appraisal Survey. The presentation of results is divided into four main sections which are household characteristics, crop results, livestock results and poverty indicators. More effort has been placed in analyzing the results in order to formulate solid conclusions than in previous censuses and surveys.

3.1 Household Characteristics

3.1.1 Type of Household

The number of agricultural households in Iringa region was 278,717 out of which 205,903 (73.9%) were involved in growing crops only and 72,814 (26.1%) were involved in crop production as well as livestock keeping. There were no agricultural households that were found either rearing livestock only or were pastoralist (Chart 3.1 and Maps 3.1, 3.2, 3.3, 3.4, 3.5 and 3.6).



3.1.2 Livelihood Activities/Source of Income

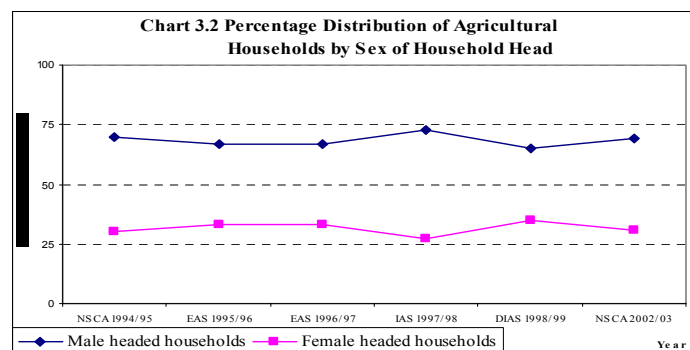
The census results for Iringa region indicates that most of the agricultural households ranked annual crop farming as an activity that provides most of their cash income, followed by off farm income, tree/forest resources, livestock keeping/herding, permanent crop farming, remittances and fishing/hunting & gathering (Table 3.1).

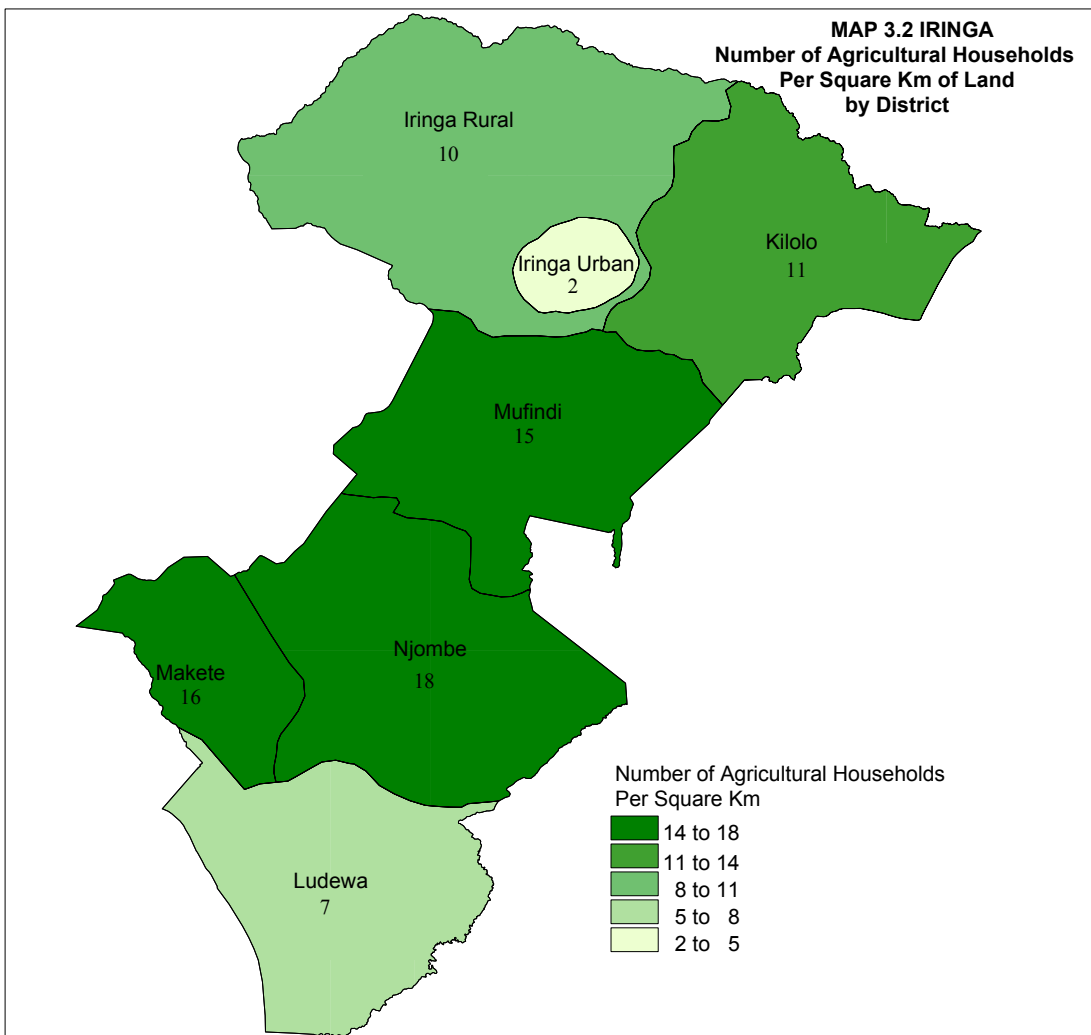
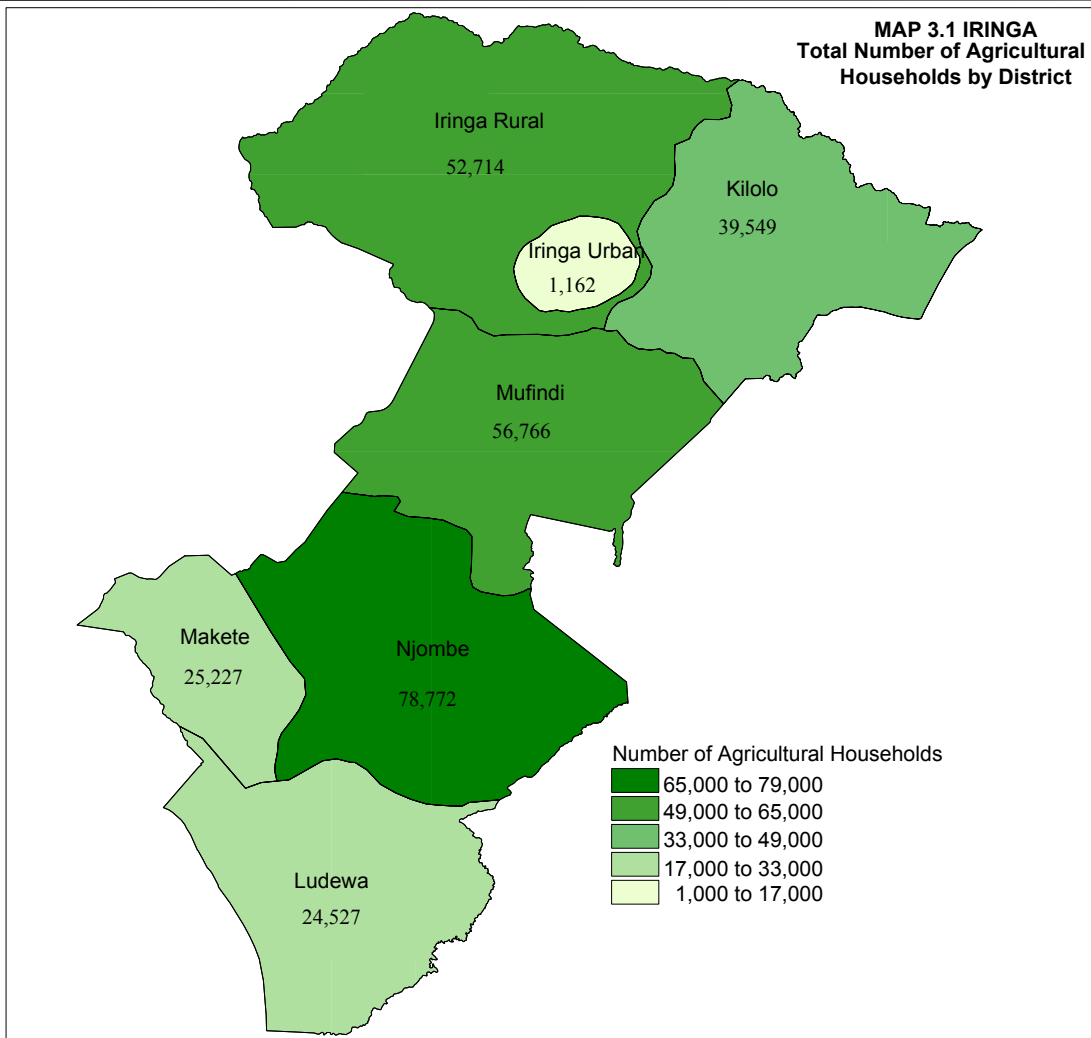
Table 3.1 The Livelihood Activities/Source of Income of the Households Ranked in Order of Importance by District

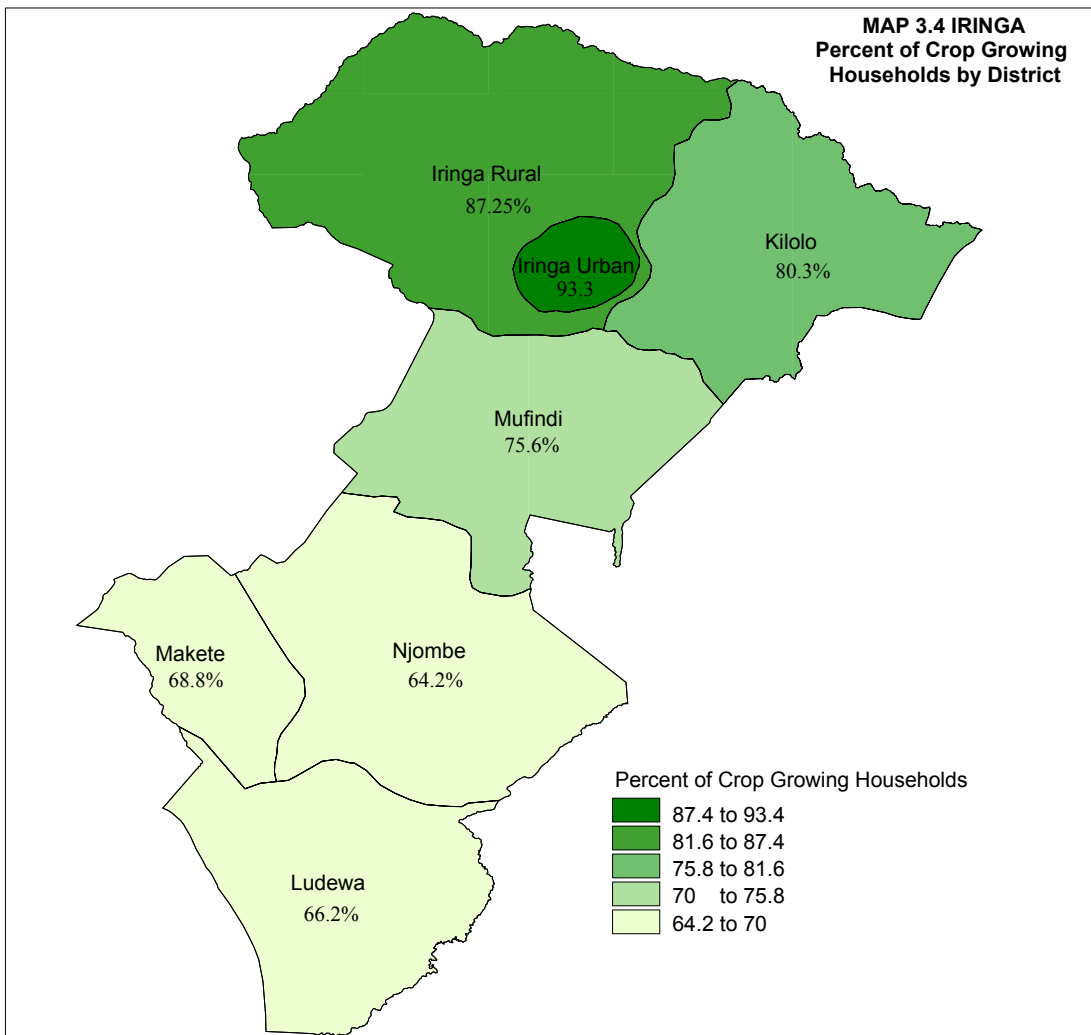
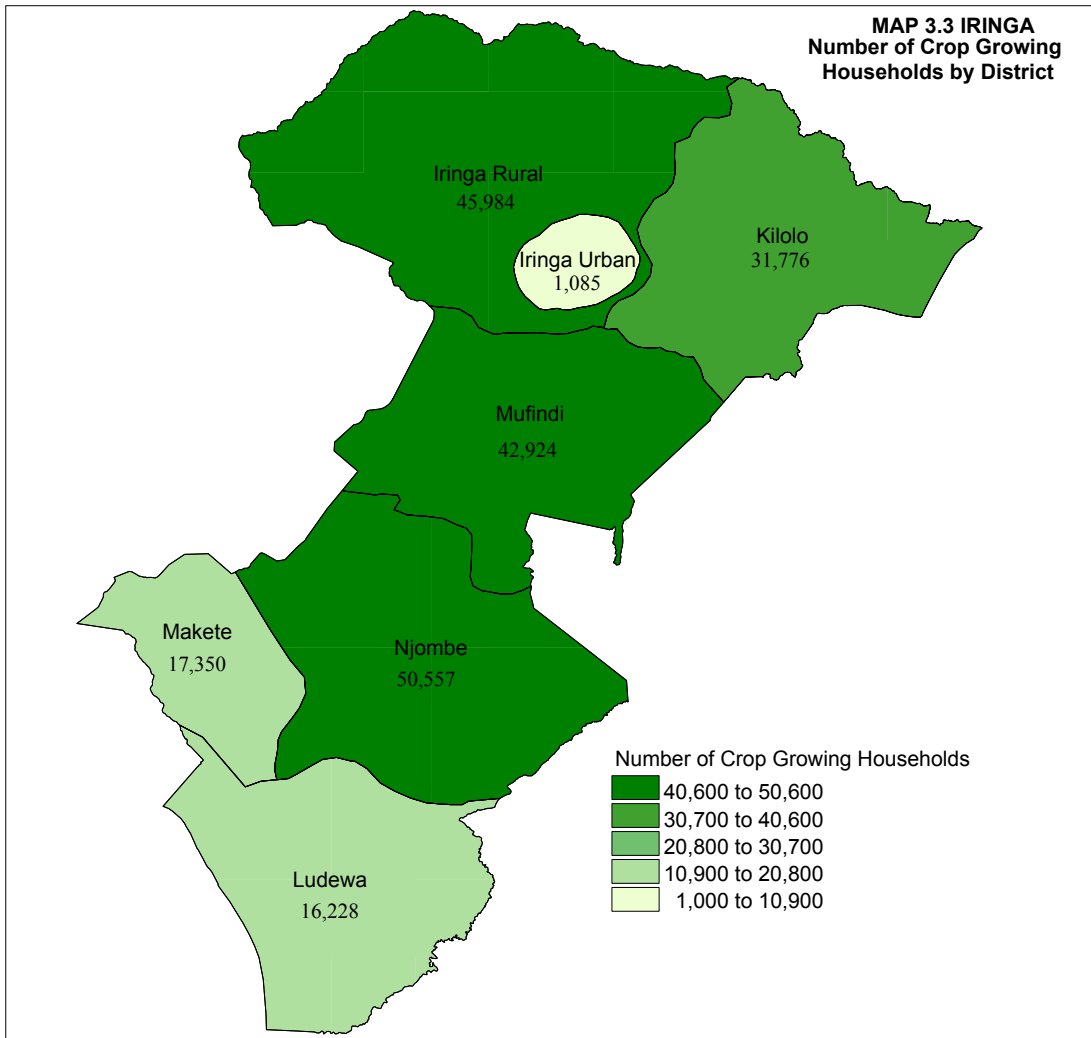
District	Livelihood Activity						
	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Iringa Rural	1	6	4	2	5	7	3
Mufindi	1	5	4	2	6	7	3
Njombe	1	6	4	2	5	7	3
Ludewa	1	5	3	4	6	7	2
Makete	1	6	3	4	5	7	2
Iringa Urban	1	6	5	2	4	7	3
Kilolo	1	5	4	2	6	7	3
Total	1	5	4	2	6	7	3

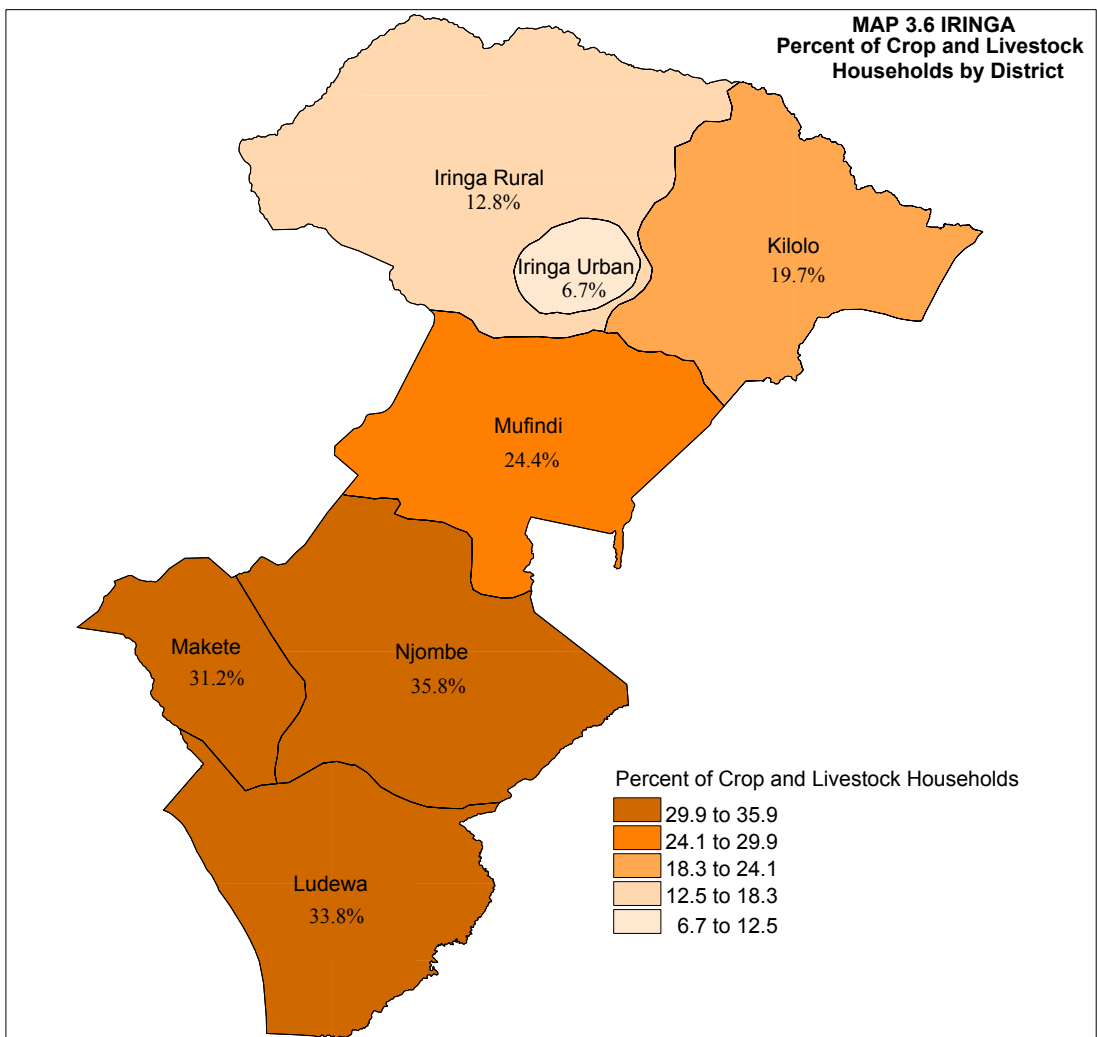
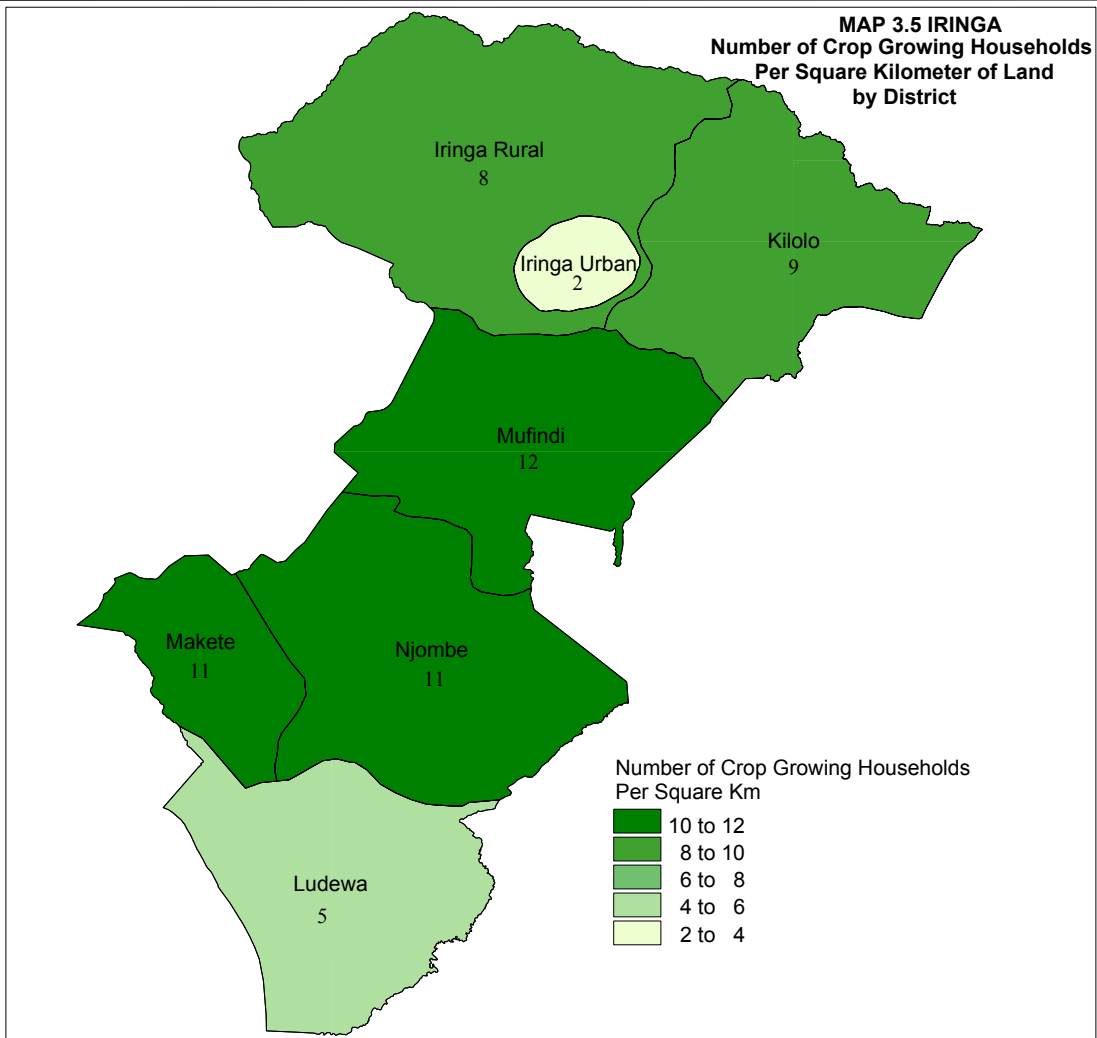
3.1.3 Sex and Age of Heads of Households

The number of male-headed agricultural households in Iringa region was 193,603 (69.5% of the total regional agricultural households) while 85,114 were female-headed households (30.5% of the total regional agricultural households). The mean age of household heads is 44 years (43 years for male heads and 46 years





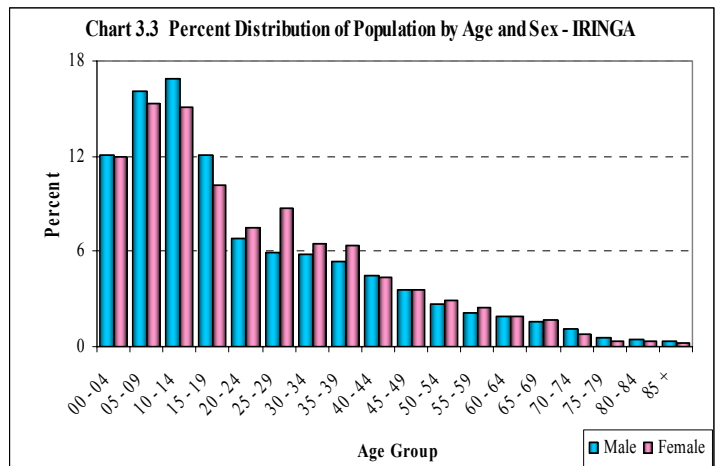




for female heads) (Chart 3.2). The percentage trend for six censuses/surveys years shows that there has not been any significant change in the distribution of agricultural households between male and female headed households.

3.1.4 Number and Age of Household Members

Iringa region had a total rural agricultural population of 1,235,122 of which 588,637 (48%) were males and 646,485 (52%) were females. The age group 0-14 had 390,712 persons which represent 32 percent of the total rural agricultural population, whilst the age group 15–64 (active population) had 650,002 persons which is equivalent to 53 percent of the total rural agricultural population in the region. Iringa region had an average household size of 4 with Mufindi, Njombe and Kilolo districts having the largest household size of 5 (Chart 3.3).



3.1.5 Level of Education

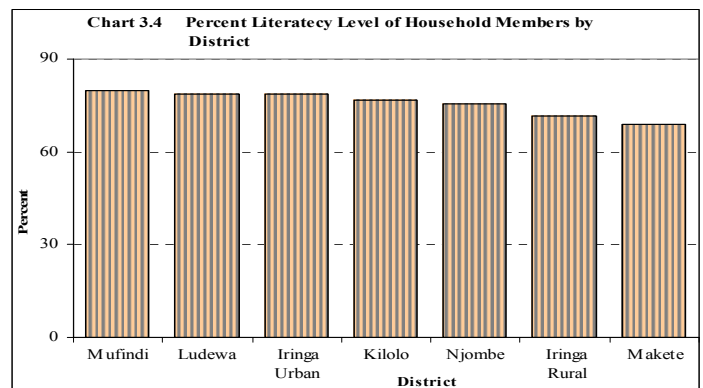
In order to obtain information on the level of education, information on literacy and education attainment were obtained for all persons aged five years and above in all households.

Literacy

The information on literacy level for family members aged five years and above was obtained by asking individual private households if their respective family members could read and write in Kiswahili only, English only, both English and Swahili or in any other language. Literacy is based on the ability to read and write Swahili, English or both.

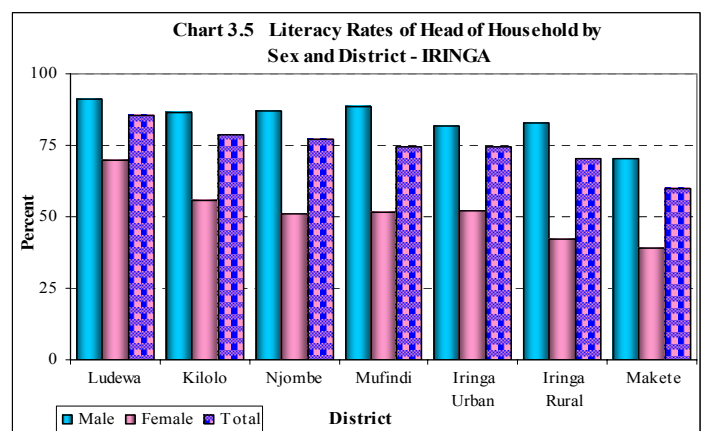
Literacy Level for Household Members

Iringa region had a total literacy rate of 76 percent. The highest literacy rate was found in Mufindi district (80%) followed by Ludewa (78.7%), Iringa Urban (78.5%) and Njombe district (75%). Makete and Iringa Rural districts had the lowest literacy rates of 69 and 72 percent respectively (Chart 3.4).



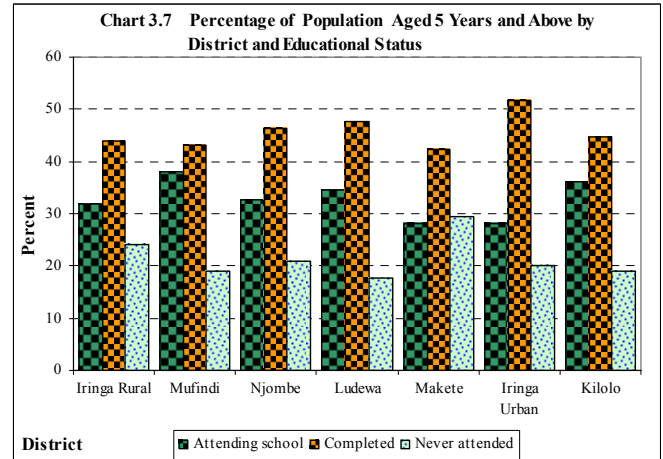
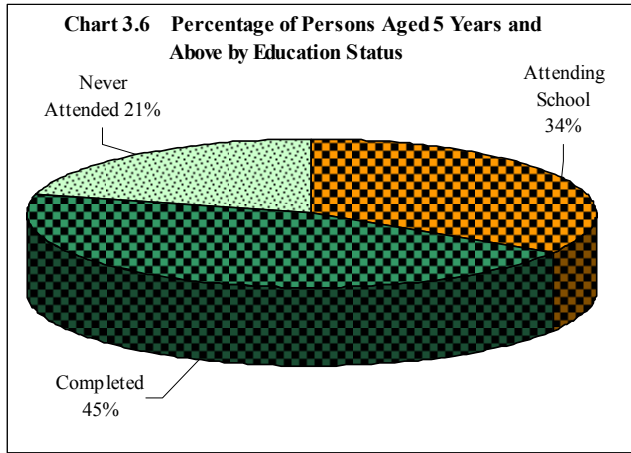
Literacy Rates for Heads of Households

The literacy rate for the heads of households in Iringa region was 75 percent. The literacy rates among the male and female heads of households were 85 and 50 percent respectively. Male head of household literacy rate was higher than that of females in all districts. The district with the highest literacy rate amongst heads of households was Ludewa (86%), followed by Kilolo (78%), Njombe (77%), Mufindi (75%), Iringa Urban (74%), Iringa Rural (70%) and Makete (60%) (Chart 3.5).



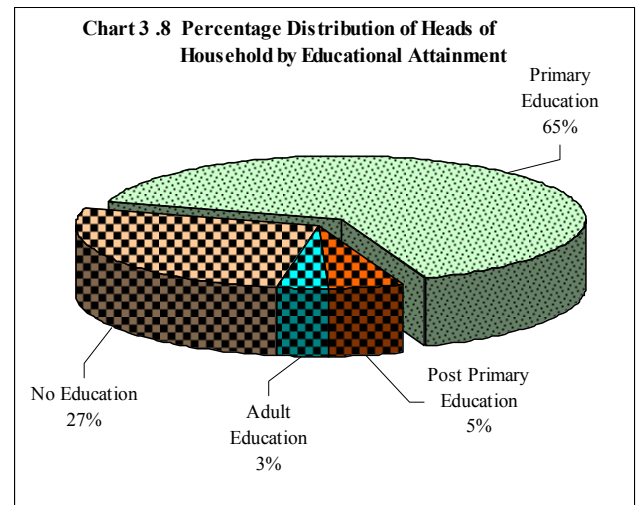
Educational Status

The results show that 45 percent of the population aged 5 years and above in agricultural households in Iringa region had completed different levels of education and 34 percent were still attending school. Those who have never attended school were 21 percent (Chart 3.6).



Agricultural households in Iringa Urban district had the highest percentage of population aged 5 years and above who had completed different levels of education (52%). This is followed by Ludewa (48%), Njombe (46%), Kilolo (45%), Iringa Rural (44%), Mufindi (43%) and Makete (42%) (Chart 3.7).

The number of heads of agricultural households with formal education in Iringa region was 194,960 (70%), those without education were 74,540 (27%) and those with only adult education were 9,216 (3%). The majority of heads of agricultural households had primary level education (180,981 households, 65%) whereas only 5 percent had post primary education (Chart 3.8).



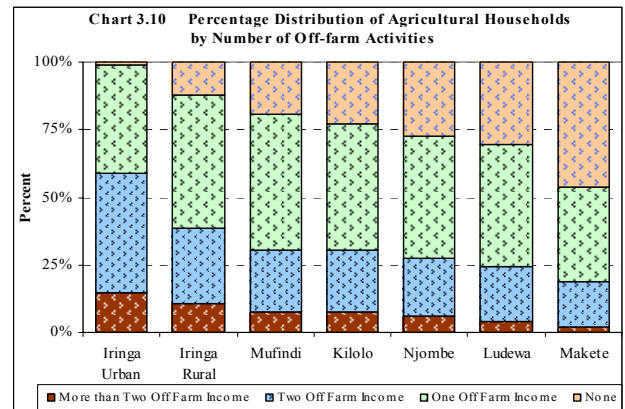
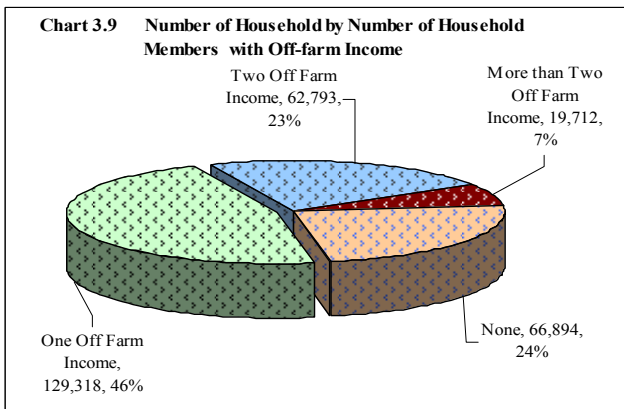
With regard to the heads of agricultural households with primary or secondary education in Iringa region, Mufindi district had the highest percentages (19% for primary and 34% for secondary). This was followed by Iringa Rural (18% primary and 24% secondary), Njombe (29% primary and 13% secondary) and Kilolo (16% primary and 11% secondary). Iringa Urban had the lowest percentage of heads of agricultural households with both primary education (0.4%) and secondary education (0.5%).

3.1.6 Off-farm Income

Off-farm income refers to cash generated from non-agricultural activities. This can be either from permanent employment (i.e., government, private sector or other), temporary employment or labourers. It also includes cash generated from working on farms belonging to other farmers. Off-farm income is important amongst agriculture households in Iringa region with 76 percent of households having at least one member with off-farm income. In Iringa region there were 129,318 households which is equivalent to (61%) had only one member aged 5 and above involved in only one off-farm

income generating activity, 62,793 households (30%) had two members involved in off-farm income generating activities and 19,712 households (9%) had more than two members involved in off-farm income generating activities.

Iringa Urban district had the highest percentage of agriculture households with off-farm income (99%) of total agriculture households in the district. Other districts with a high percent of agriculture household members with off-farm income were



Iringa Rural (88%), Mufindi (81%), Kilolo (77%) and Njombe (73%). Makete and Ludewa districts had the lowest percent of agriculture household members with off-farm income (54% and 69% respectively). The district with the highest percent of agriculture households with more than one member with off-farm income was Iringa Urban (59%). Makete district had very few households with more than one member having off-farm income (19%).

3.2 Land Use

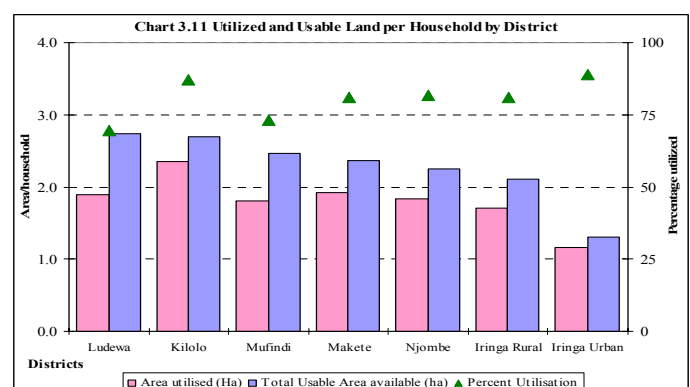
Land area and planted area are two different types of area measurements. Land area refers to the physical area of land and is the same regardless of the number of crops planted on the land in one year. Planted area is the total area of crops planted in a year and the area is summed if there were more than one crop on the same land per year. A number of terms are used in this section which requires defining for clarification as follows:

Land available refers to the area of land that has been allocated to smallholders through customary law, official title or other forms of ownership. Land available does NOT mean the total area of land that is designated as agriculture land in the country; however it is the land that is available to smallholders given the location of villages and lack of access to more remote parcels of unused agriculture designated land.

Usable land refers to the available land minus the land that cannot be used e.g. bare rock, shallow soils, steep slopes, swamp areas etc. It does however include un-cleared bush. Utilised land refers to the land that was used during the year.

3.2.1 Area of Land Utilised

The total area of land available to smallholders in Iringa region was 662,512 hectares. The regional average land area utilised for agriculture per household was 2 hectares. This figure is equivalent to the national average which is

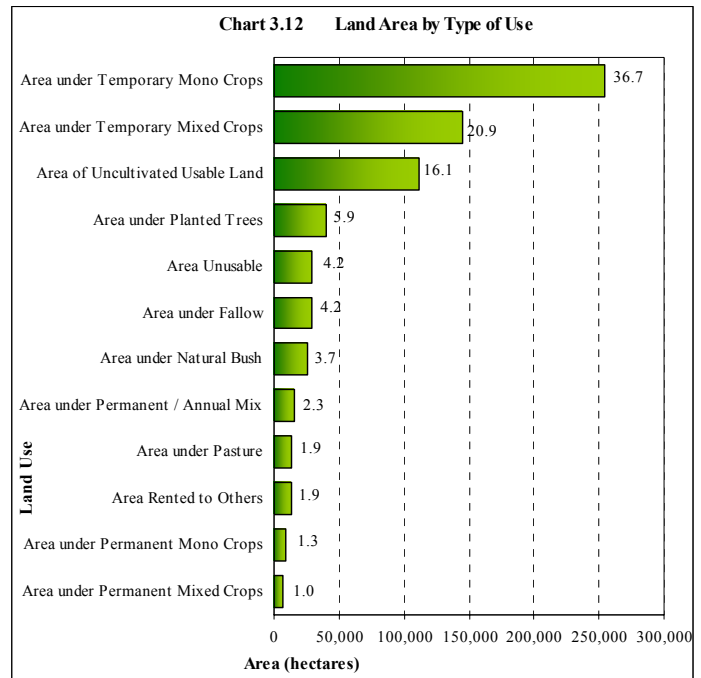


also 2.0 hectares per household. Seventy nine percent of the total land available to smallholders was utilised (Chart 3.11 and Map 3.7).

Small differences in land area utilised per household exist between districts with Kilolo utilizing 2 hectares per household. The smallest land area utilised per household is found in Iringa Urban with (1.3 ha). The percentage utilized of the usable land per household is highest in Iringa Urban district (89%) and lowest in Ludewa district (69%) (Chart 3.11).

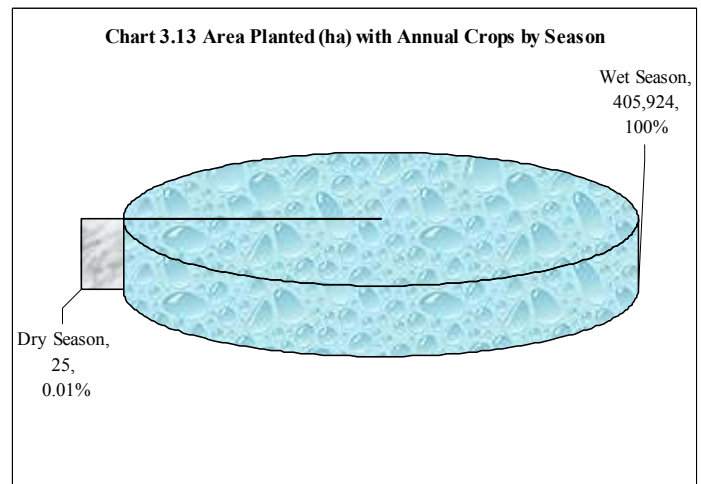
3.2.2 Types of Land Use

The area of land under temporary mono crop was 253,966 hectares (36.7%) of the total land available to smallholders in Iringa, temporary mixed crops 144,871 hectares (20.9%), followed by un-cultivable usable land (111,464 hectares (16.1%), planted with trees 40,484 hectares (6.0%), unusable area 29,318 hectares (4.2%), area under fallow 29,220 hectares (4.2%), area under natural bush 25,366 hectares (3.7%), permanent/annual mix 15,714 hectares (2.3%), area under pasture 13,005 hectares (1.9%), area rented to others 12,913 hectares (1.9%), permanent mono crop 8,711 hectares (1%) and permanent mixed crop 6,800 hectares (1%) (Chart 3.12).



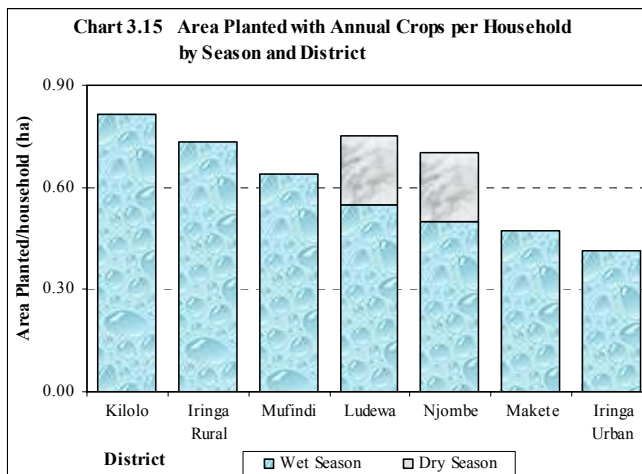
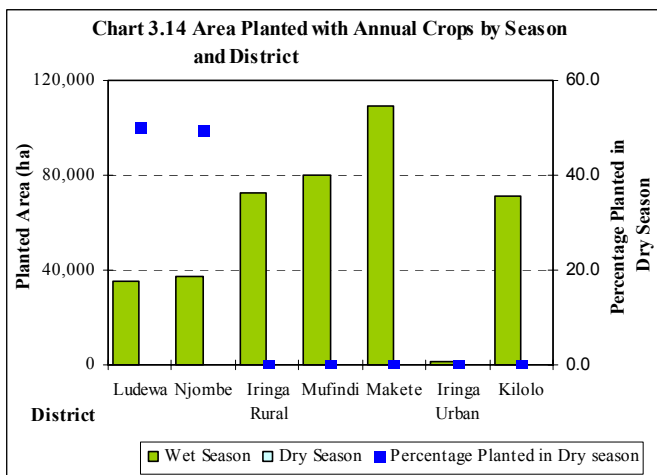
3.3 Annual Crops and Vegetable Production

Iringa region has only one rainy season namely the wet season so the planted area is more or less the same as the area planted in the wet rainy season (Chart 3.13).



3.3.1 Area Planted

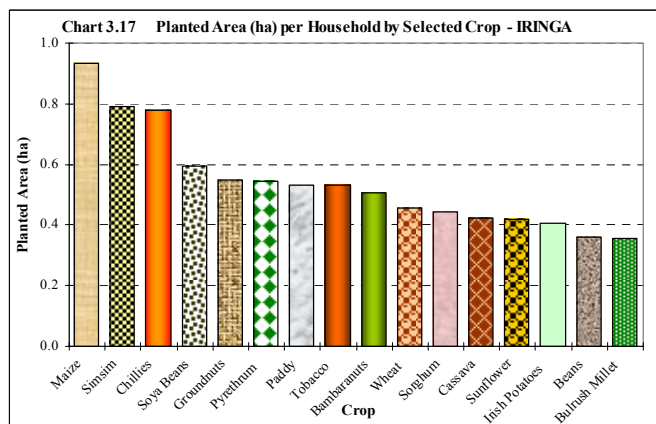
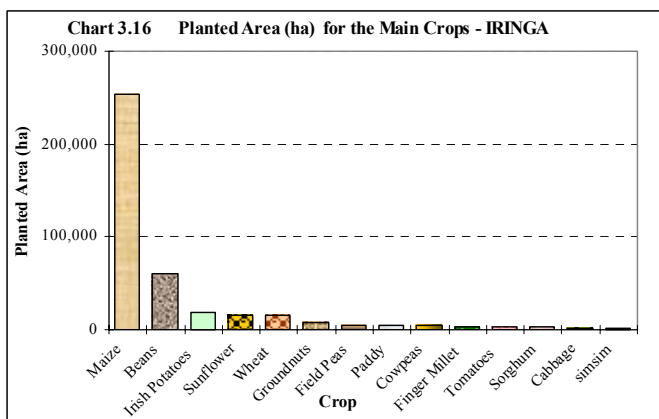
The area planted with annual crops and vegetables in the region was 405,949 hectares. Out of which 25 hectares or (0.01%) were planted during dry season and 405,924 hectares or (99.99%) were planted in wet season (Chart 3.14). Cultivation during dry season is so small that comparisons between the wet and dry season is inappropriate. The average area planted per household in the wet season was 0.6 hectares. The district with the largest area planted per household in wet season was Kilolo (0.81 ha) followed by Iringa Rural (0.73 ha). The district with the smallest average area planted was Iringa Urban (0.41 ha) (Chart 3.15 and Maps 3.8 and 3.9).

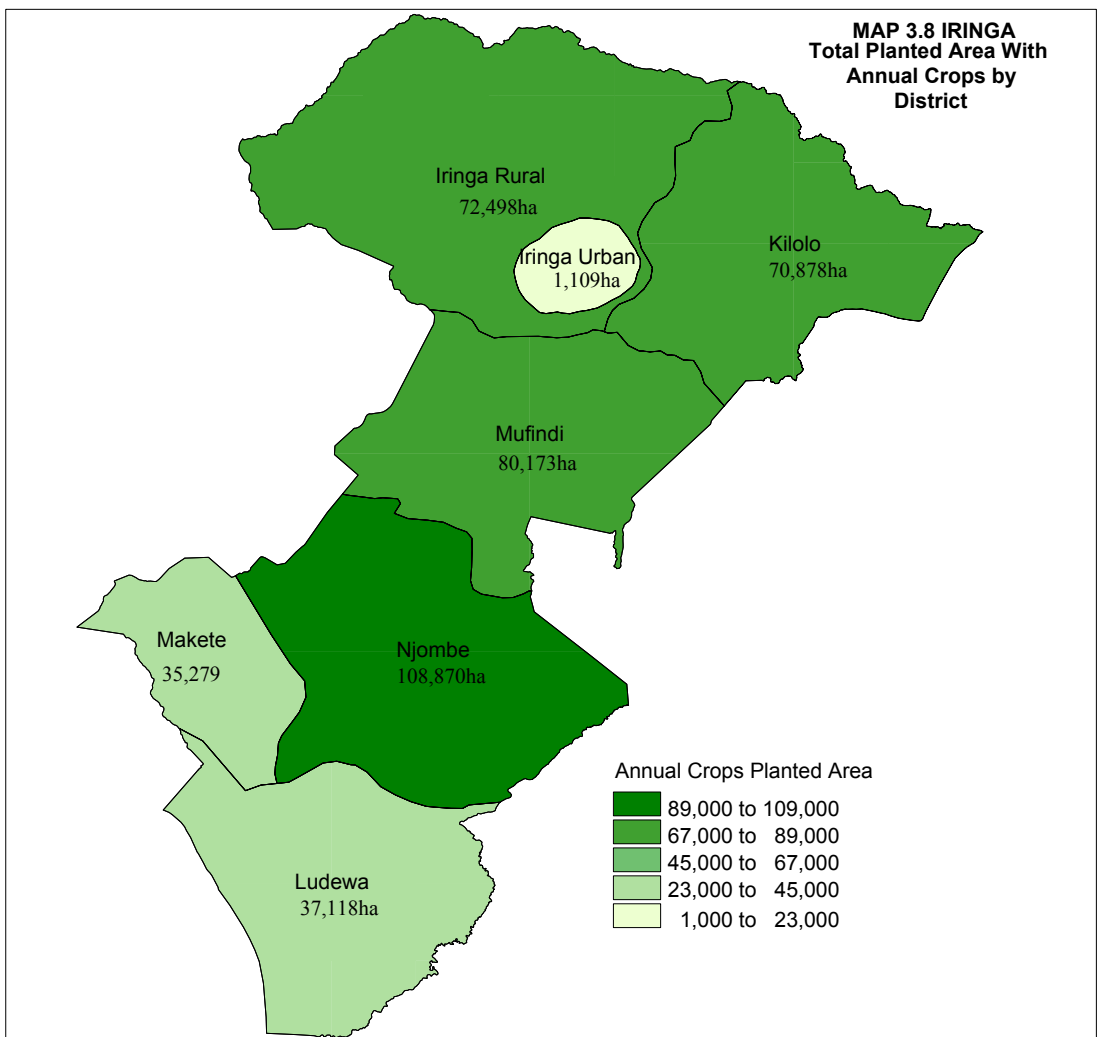
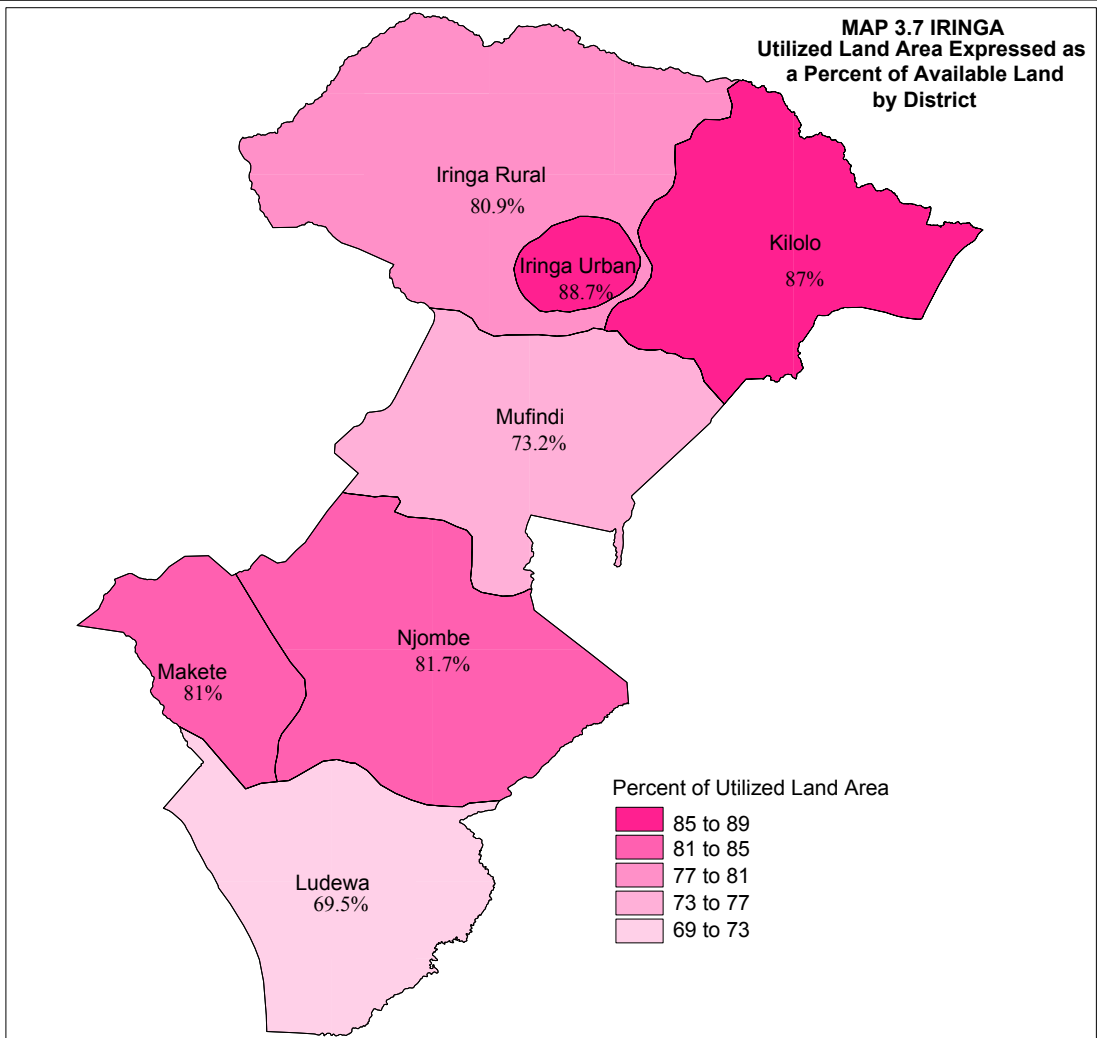


Results on crop production are presented in two different sections. The first section compares the importance of each crop regardless of whether they are annual or permanent. The second section contains a more detailed analysis on production based on crop types.

3.3.2 Crop Importance

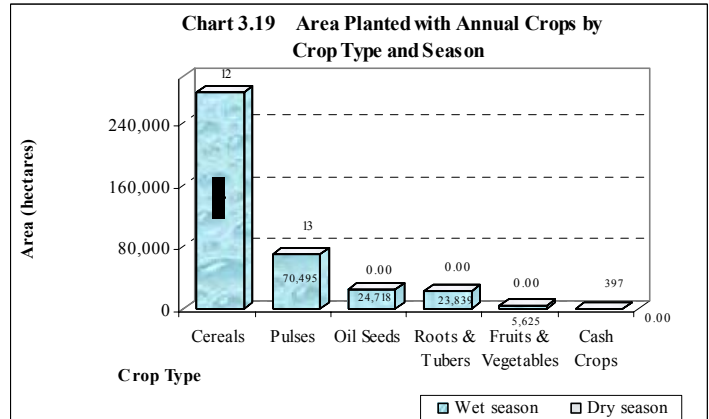
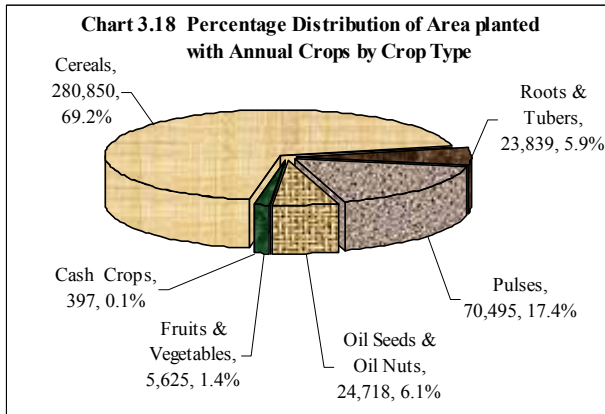
Maize is the dominant annual crop grown in Iringa region and has a planted area 4.7 times greater than beans, which has the second largest planted area. The area planted with maize constitutes 63 percent of the total area planted with annual crops in the region. Other crops in order of their importance (based on area planted) are Irish potatoes, sunflower, wheat, groundnuts, field peas, paddy, cowpeas, finger millet, tomatoes, sorghum, cabbage, simsim and bambaranuts. The remaining crops are either not grown or are produced in very small quantities (Chart 3.16). Chart 3.17 shows the area planted per household growing selected crops. Households that grow maize, simsim and chillies have larger planted areas per household than households growing other crops (Chart 3.17).





3.3.3 Crop Types

Cereals are the main crops grown in Iringa region. The area planted with cereals was 280,850 hectares which is equivalent to (69.2%) of the total planted area, this was followed by pulses with 70,495 hectares (17.4%), oil seeds (24,718 ha, 6.1%), root and tubers (23,839 ha, 5.9%), fruit and vegetables (5,625 ha, 1.4%) and annual cash crops (mainly tobacco) with a planted area of (397 ha, 0.1%) (Charts 3.18 and 3.19).



3.3.4 Cereal Crop Production

The total production of cereals was 285,026 tonnes. Maize was the dominant cereal crop with 265,945 tonnes which was 93 percent of total cereal crops produced, followed by paddy (8,099t, 2.84%), wheat (7,901t, 2.77%), finger millet (1,793t, 0.63%), sorghum (1,206t, 0.42%), Barley (47t, 0.02%) and Bulrush Millet (35t, 0.01) (Table 3.2 and Map 3.10).

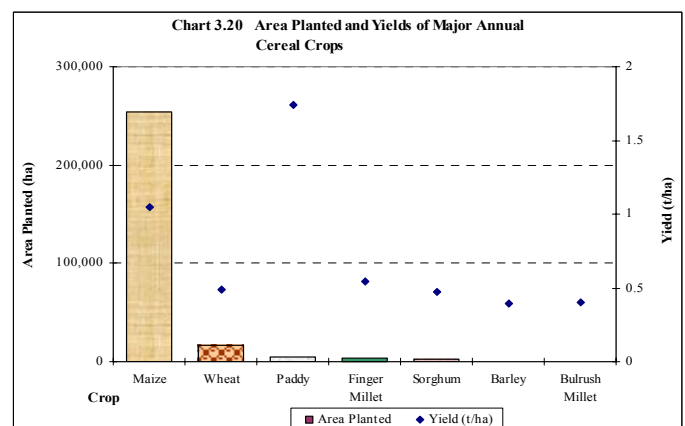
The area planted with maize was dominant and it represented 90.4 percent of the total area planted with cereal crops, followed by wheat (5.8%), paddy (1.7%), finger millet (1.2%), sorghum (0.9%), barley (0.04%) and bulrush millet (0.03%). The yield of paddy was 1.74 t/ha, for maize it was 1.05 t/ha, for finger millet it was 0.54 t/ha, for wheat it was 0.49 t/ha, for bulrush millet it was 0.4 t/ha and for barley it was 0.39 t/ha (Chart 3.20).

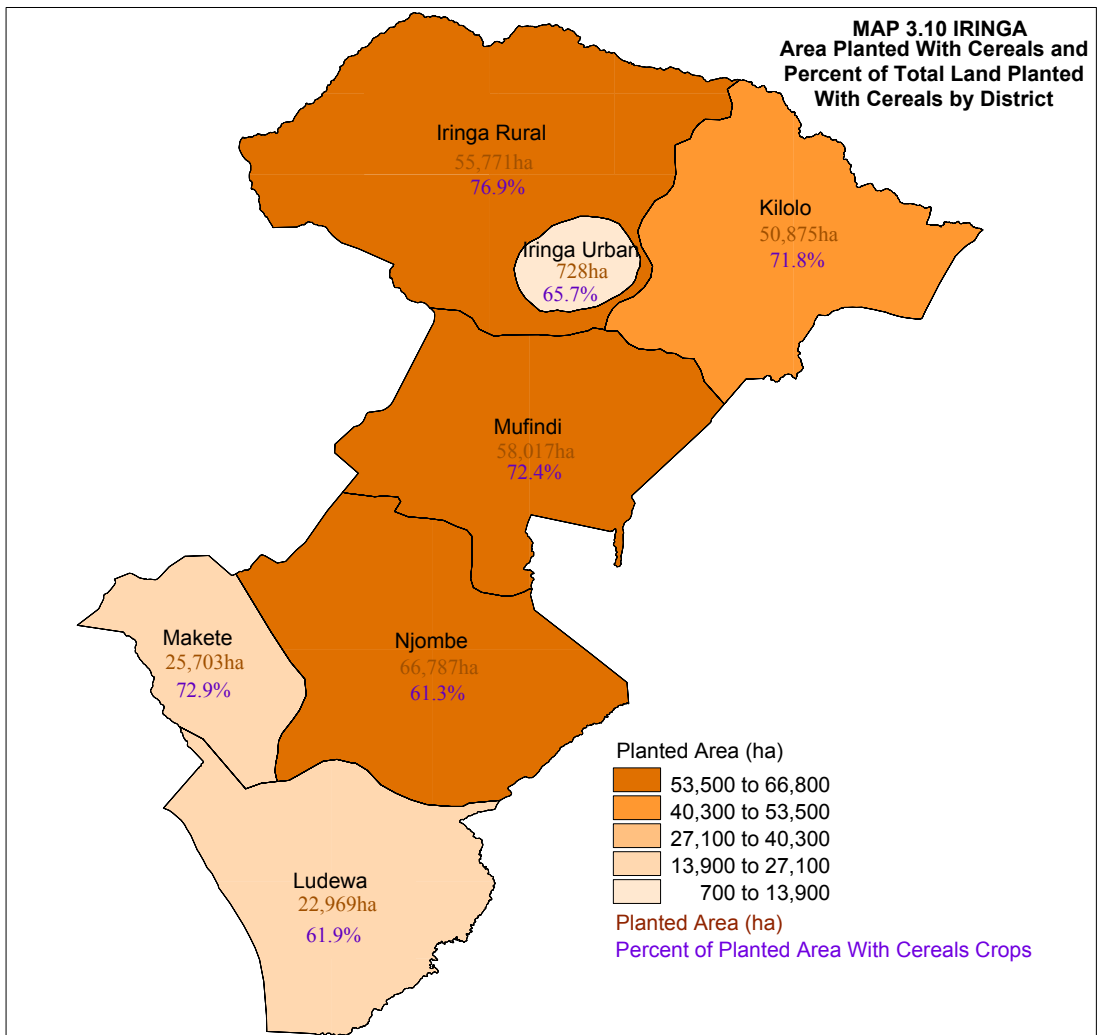
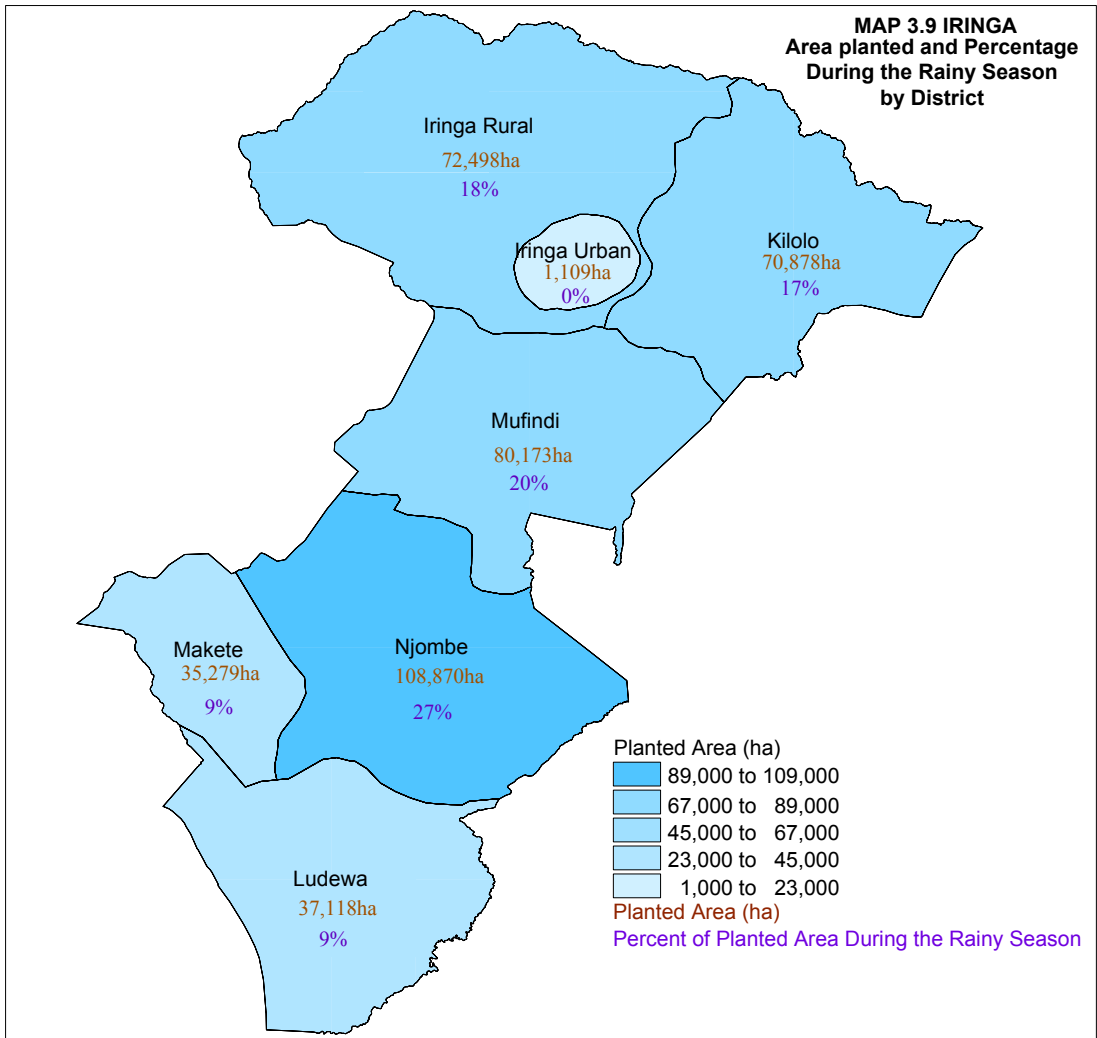
3.3.4.1 Maize

Maize dominates the production of cereal crops in the region. The number of households growing maize in Iringa region was 271,618 (97% of the total crop growing households in the region). The total production of maize was 265,945 tonnes from a planted area of 253,874 hectares resulting in a yield of 1.05 t/ha. Chart 3.21 indicates maize production trend (in thousand metric tonnes) for Iringa region during the wet season. There was a decrease in maize production by (31%) over the period of 1994 to 1996, after which the production increased gradually. The area of maize planted per household was 0.93 hectares.

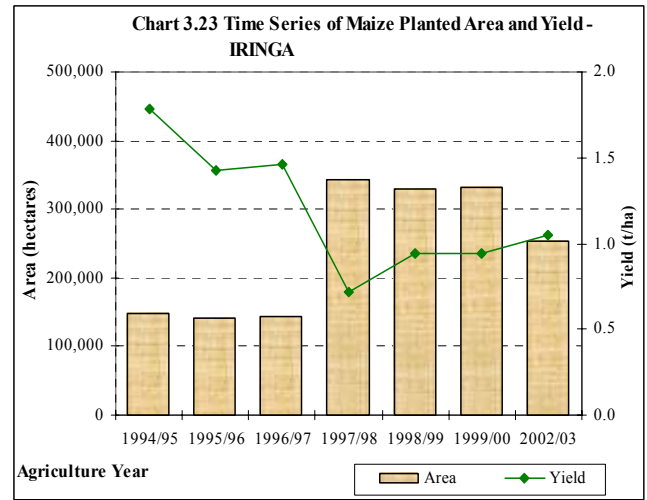
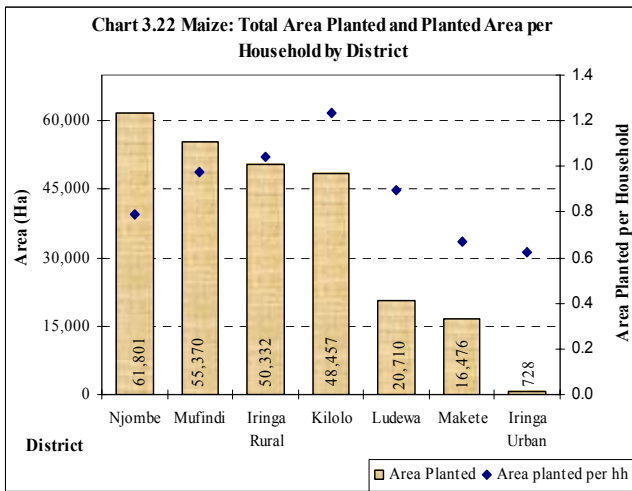
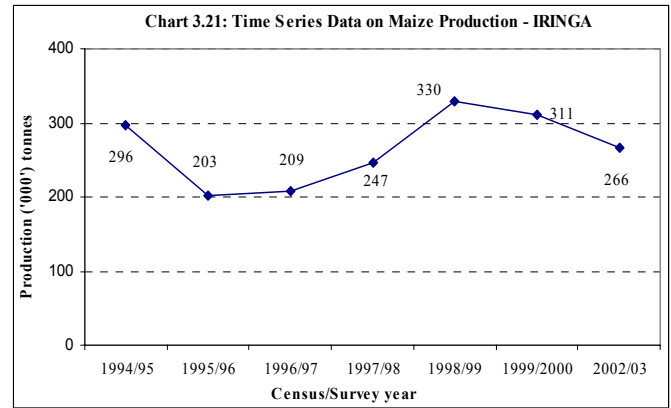
Table 3.2 Cereal Production by Type of Cereal

Crop	Number of Households	Area Planted (ha)	Quantity Harvested (tonnes)	Yield (t/ha)
Maize	271,618	253,874	265,945	1.05
Wheat	35,524	16,223	7,901	0.49
Paddy	8,760	4,666	8,099	1.74
Finger Millet	9,956	3,326	1,793	0.54
Sorghum	5,741	2,555	1,206	0.47
Barley	638	120	47	0.39
Bulrush Millet	241	86	35	0.40
Total		280,850	285,026	





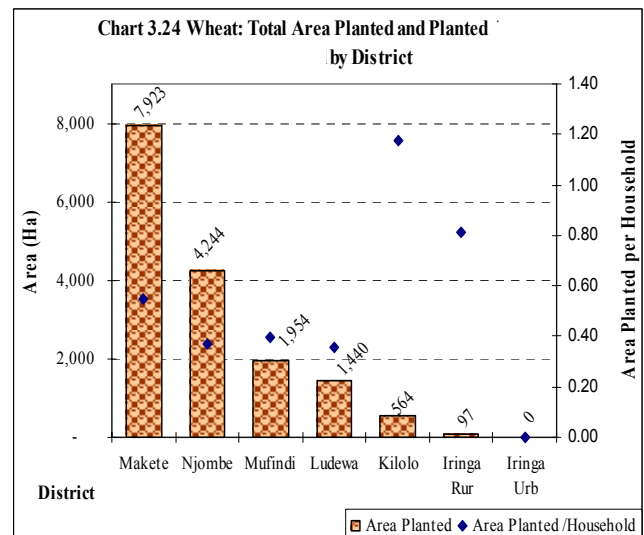
The largest area planted with maize per household was found in Kilolo district (1.24 ha), followed by Iringa Rural (1.04 ha), Mufindi (0.98 ha), Ludewa (0.90 ha), Njombe (0.79 ha), Makete (0.67 ha) and Iringa Urban (0.62) (Map 3.12). Njombe district had the largest planted area of maize (61,801 ha), followed by Mufindi (55,370 ha), Iringa Rural (50,332 ha), Kilolo (48,457 ha), Ludewa (20,710 ha), Makete (16,476 ha) and Iringa Urban (728 ha) (Chart 3.22 and Map3.11).

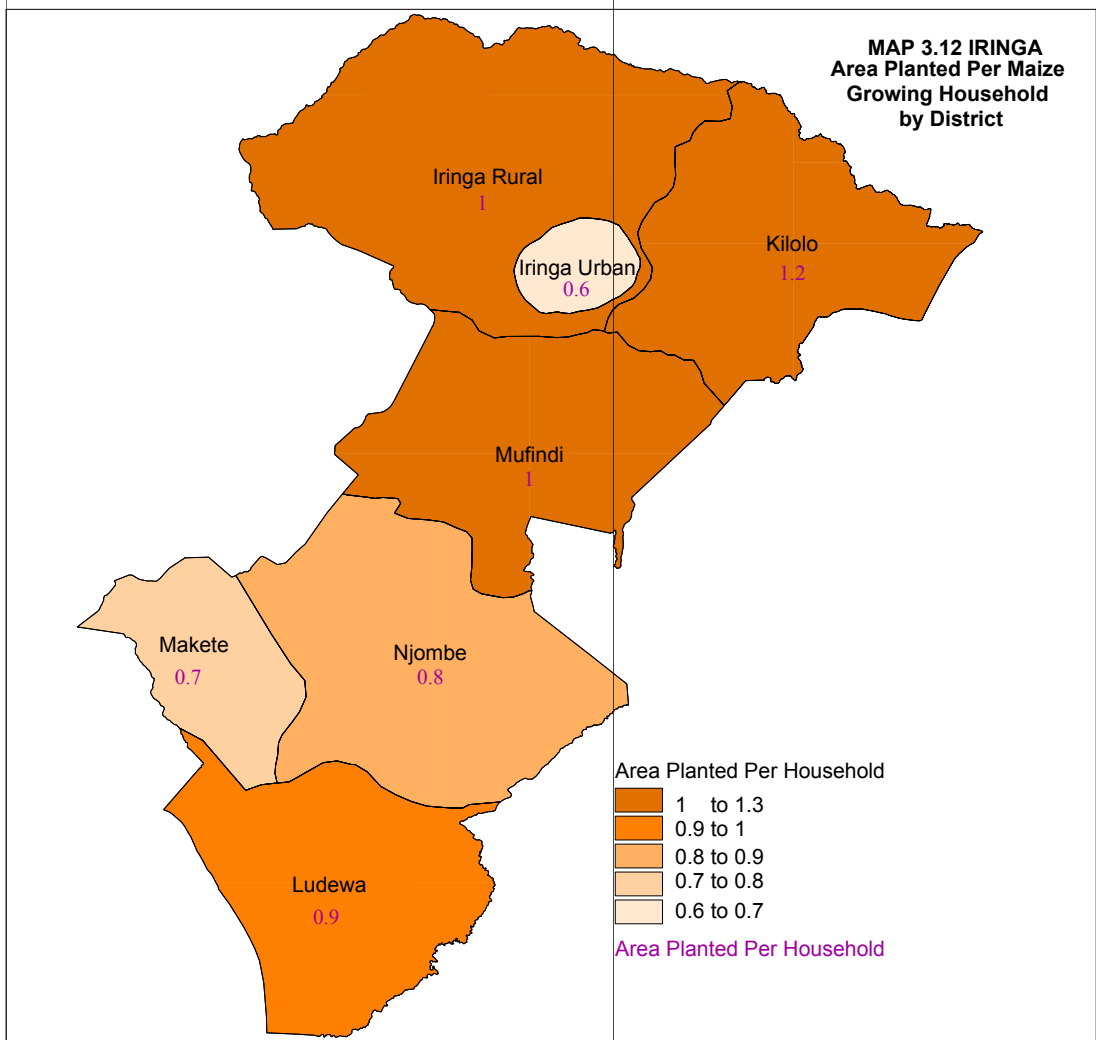
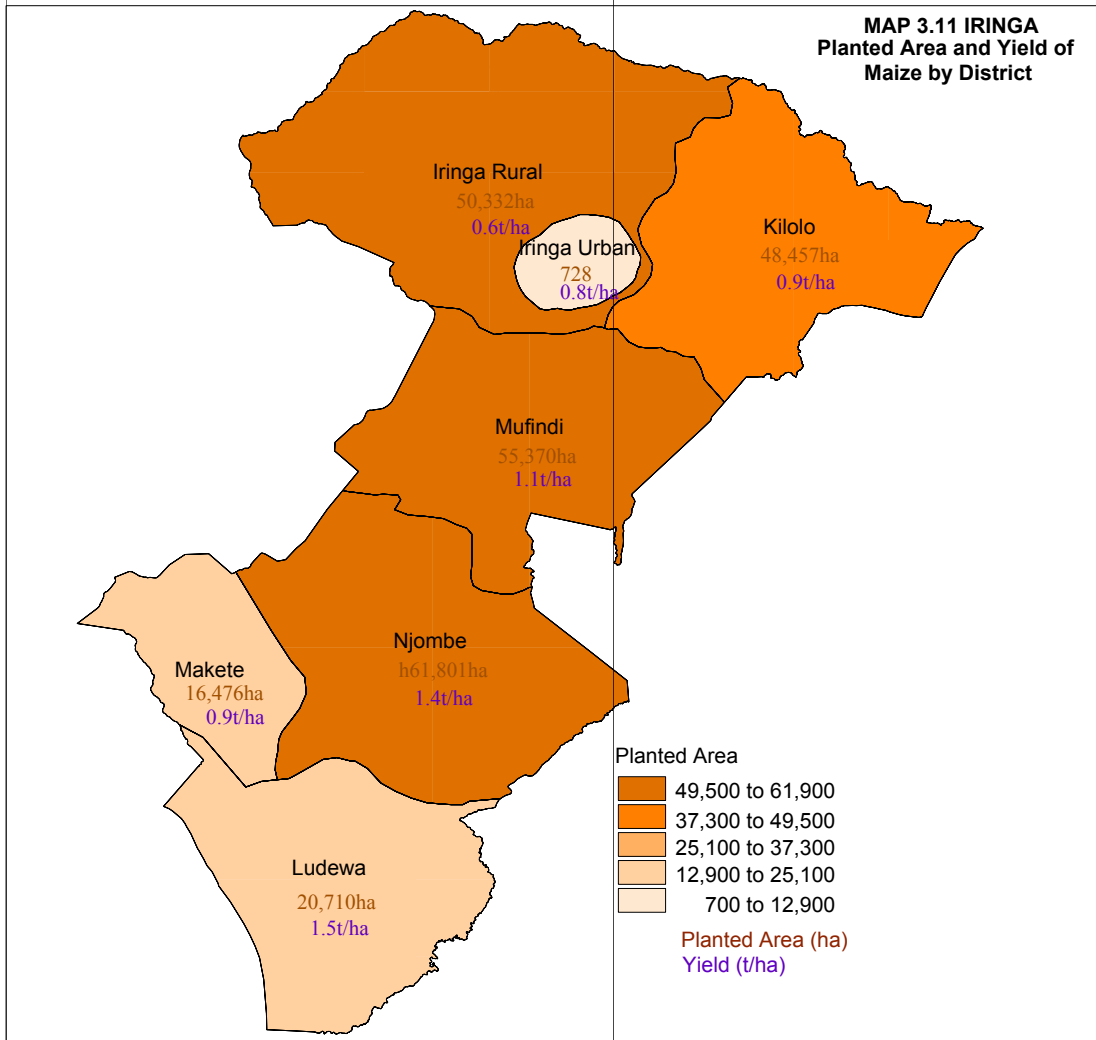


The yield of maize dropped dramatically over the period 1995 to 1998 and has remained constant at this low level, the quantity produced has increased and this has been due to a large increase in the area under production. The area planted with maize remained constant over the period from 1994 to 1997 after which the area under production expanded gradually until 2000 and the planted area has remained constant ever since. The yield of maize has shown a sharp decline over the period 1997 to 1998 (from 1.5t/ha in 1997 to 0.6 t/ha in 1998) (Chart 3.23). This complies with the national trend that the increase in production of maize is a result of an increase in the planted area and not productivity. The increase in the planted area has been offset by the decline in yield resulting in a smaller increase in production than what would be expected.

3.3.4.2 Wheat

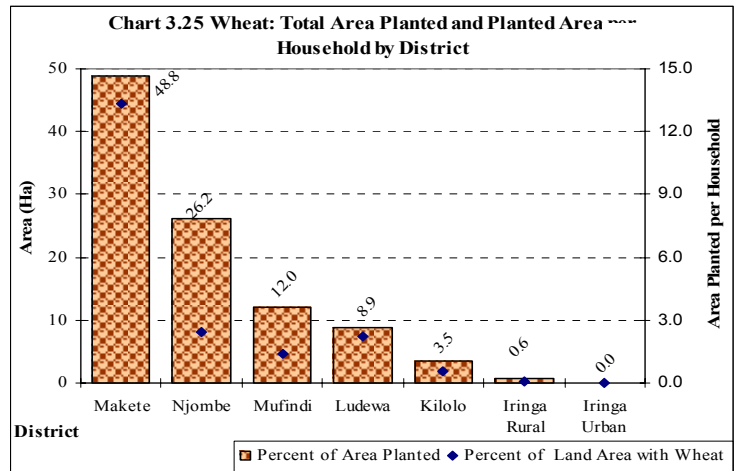
Wheat is the second most important cereal crop in Iringa region in terms of planted area. The number of households that grew wheat in Iringa region during the wet season was 35,524. This represents 13 percent of the total crop growing households in Iringa region in the wet season. The total production of wheat was 7,901 tonnes from a planted area of 16,223 hectares resulting in an average yield of 0.49 t/ha. The area planted with wheat accounts for 4 percent of the total area planted with annual crops and vegetables in the census year. The district with the largest area planted with





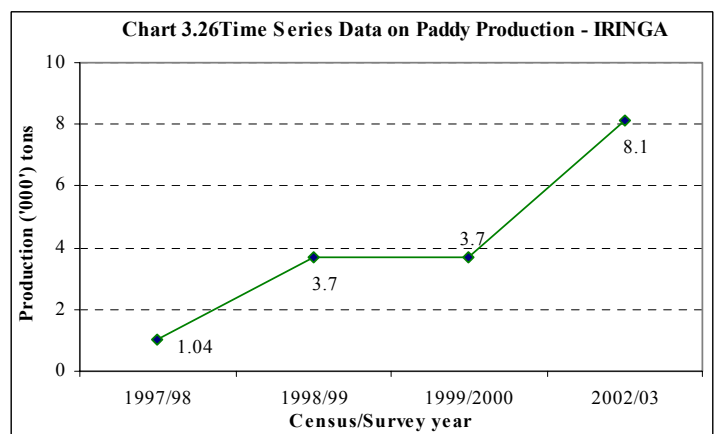
wheat was Makete (7,923 ha) followed by Njombe (4,244 ha), Mufindi (1,954 ha), Ludewa (1,440 ha), Kilolo (564 ha) and Iringa Rural (97 ha). The district with the largest wheat planted area per household is Kilolo (1.17ha), followed by Iringa Rural (0.81 ha), Makete (0.55 ha, Mufindi (0.40 ha) Njombe (0.37 ha) and Ludewa (0.35 ha). No wheat was grown in Iringa urban district (Chart 3.24).

The highest proportion of land planted with wheat, expressed as a percent of the total land area was also found in Makete district (13%). This was followed by Njombe (2.4%), Ludewa (2.2%), Mufindi (1.4%), Kilolo (0.5) and Iringa Rural (0.1%) (Chart 3.25).

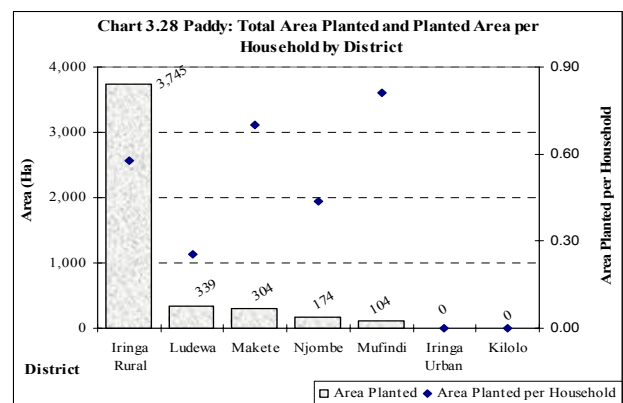
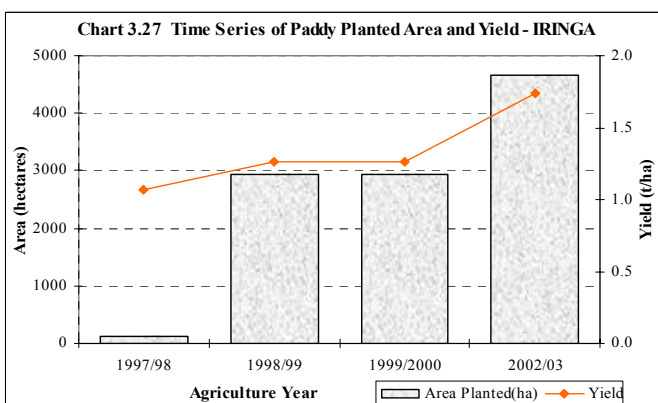


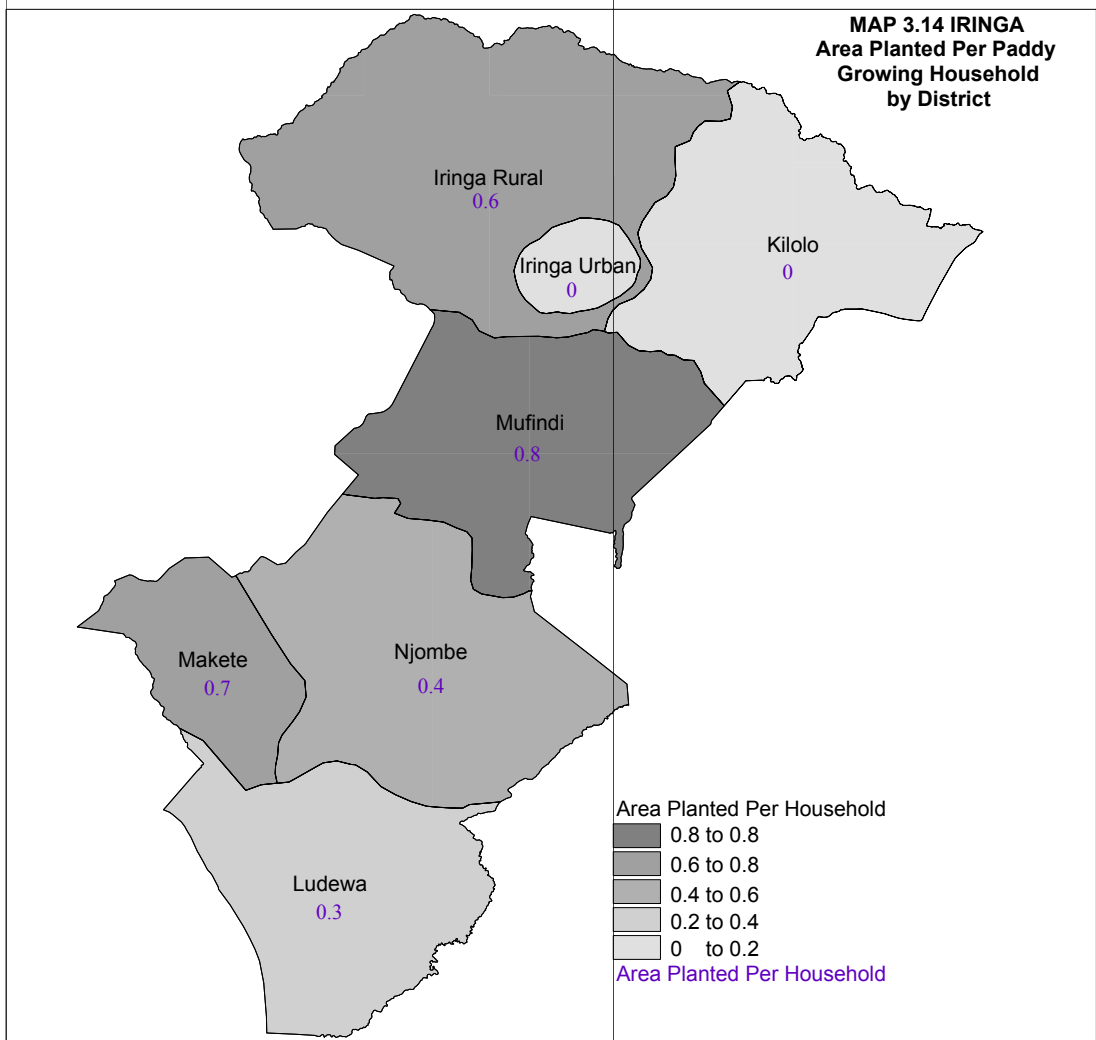
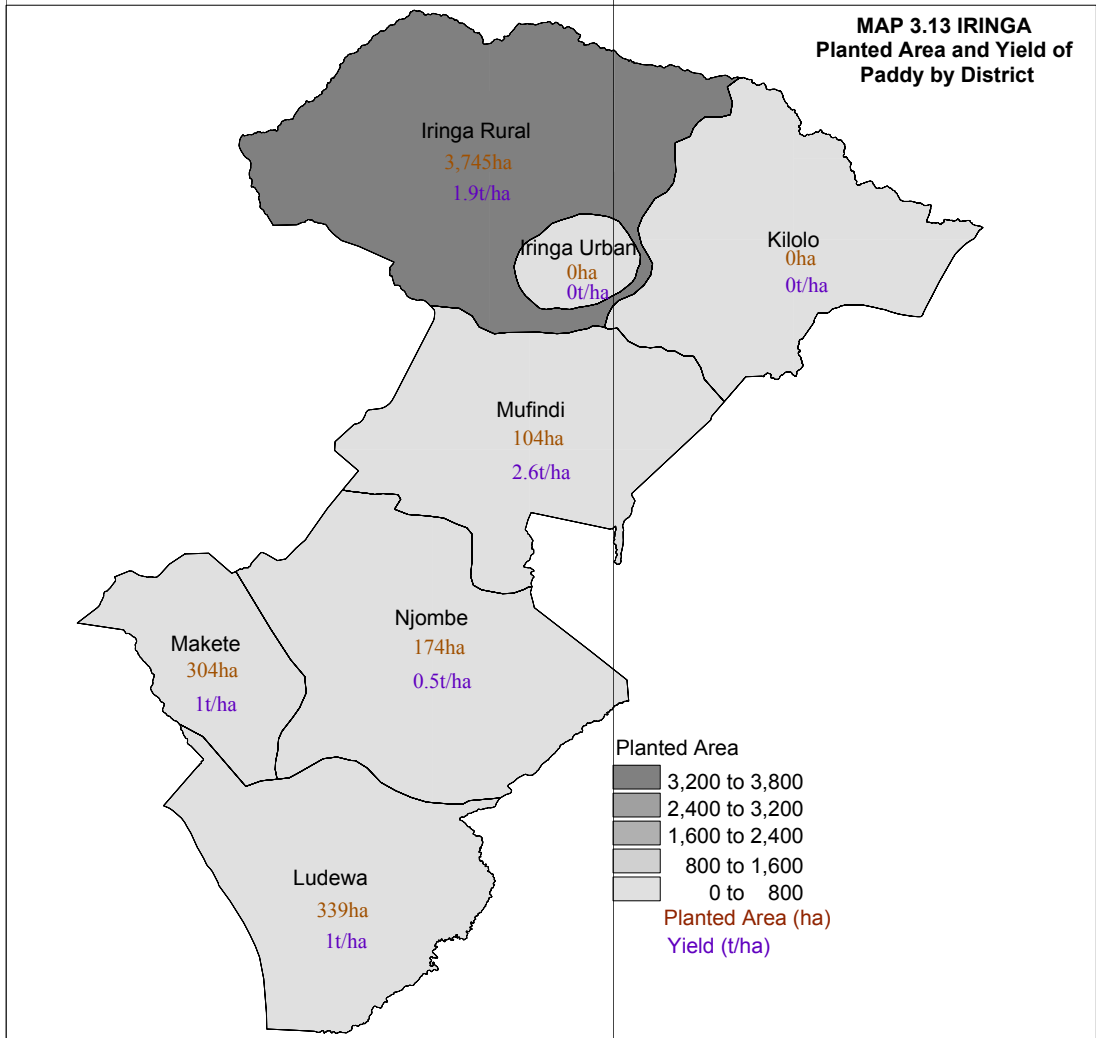
Paddy

Paddy is the third most important cereal crop in the region in terms of planted area. The number of households that grew paddy in Iringa region during the wet season was 8,760. This represents 3 percent of the total crop growing households in Iringa region in the wet season. The total production of paddy was 8,099 tonnes from a planted area of 4,666 hectares resulting in an average yield of 1.74 t/ha. There was a sharp rise in the production of paddy in 1998/99 and this was a result of an increase in planted area and not productivity. The production rose again from 3.7 tons in 1999/2000 to 8,100 tonnes in 2002/03 (Chart 3.26). This increase in production was a result of both an increase in planted area and productivity, with the yield rising to 1.7 tonnes in 2002/03 (Chart 3.37 and Map 3.13).



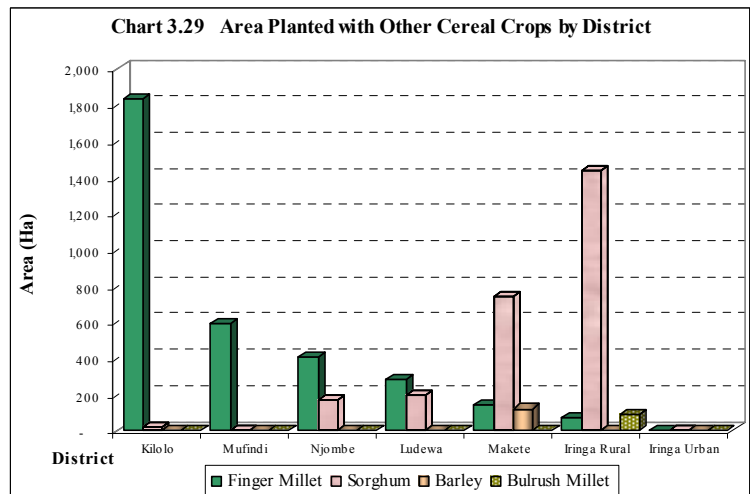
The district with the largest area planted with paddy was Iringa Rural (3,745 ha), followed by Ludewa (339 ha), Makete (304 ha), Njombe (174 ha) and Mufindi (104 ha). Kilolo and Iringa Urban districts did not grow paddy. There are significant variations in the average area planted per crop growing household among the districts ranging from 0.25 ha in Ludewa to 0.81 ha in Mufindi (Chart 3.28 and Map 3.14).





3.3.4.4 Other Cereals

Finger millet and sorghum are the fourth and fifth most important cereal crops grown in Iringa region during the rainy season. Most finger millet was planted in Kilolo districts with 1,834 ha, followed by Mufindi (588 ha), Njombe (403 ha), Ludewa (285 ha), Makete (142 ha) and Iringa Rural (73 ha). Finger millet was not grown in Iringa Urban district. On the other hand sorghum was grown in five districts with Iringa Rural having a planted area of 1,438 ha, followed by Makete (739 ha), Ludewa (194 ha), Njombe (165 ha) and Kilolo (19 ha). Mufindi and Iringa Urban districts did not grow sorghum. Very small quantities of bulrush millet was grown in Iringa Rural district (86 ha) and small quantities of barley was grown in Makete district (120 ha) (Chart 3.29).

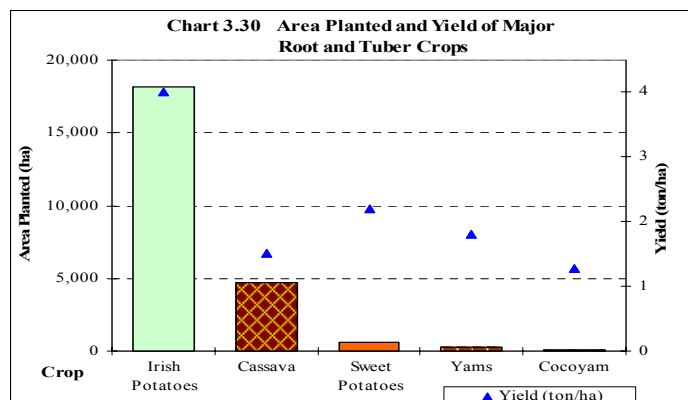


3.3.5 Root and Tuber Crop Production

The total production of roots and tubers was 81,890 tonnes. The production of Irish potatoes was higher than the production of any other root and tuber crop in the region with a total production of 72,865 tonnes representing 89 percent

Table 3.3 Area, Production and Yield of Root & Tuber Crops in Rainy Season

Crop	Area Planted (ha)	Quantity Harvested (tonnes)	Yield (ton/ha)
Irish Potatoes	18,178	72,865	4.01
Cassava	4,737	7,124	1.5
Sweet Potatoes	649	1,428	2.2
Yams	227	413	1.82
Cocoyam	48	61	1.28
Total	23,839	81,890	



of the total root and tuber crops production. This was followed by cassava (7,124t, 8.7%), sweet potatoes (1,428t, 1.7%), yams (413t, 0.5%) and cocoyam (61t, 0.1%) (Table 3.3). The total planted area of root and tuber crops was 23,839 ha with Irish potatoes having the largest planted area of 18,178 ha (76.3%). This was followed by cassava (4,737 ha, 19.9%), sweet potatoes (649 ha, 2.7%), yams (227 ha, 1.0%) and cocoyam (48 ha, 0.2%) (Chart 3.30).

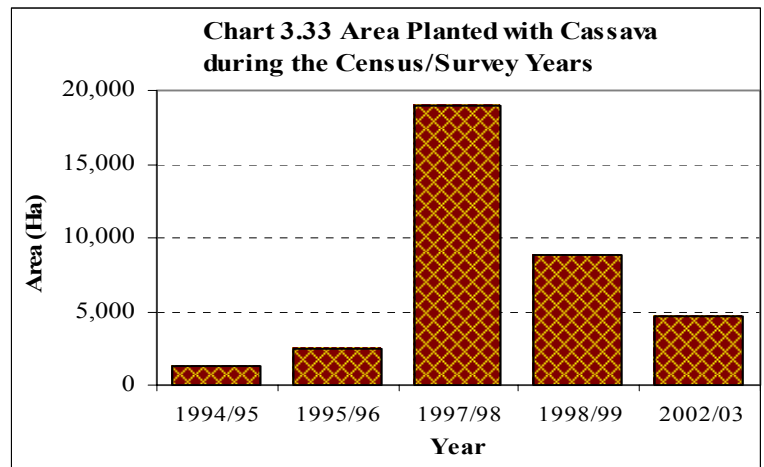
3.3.5.1 Irish Potatoes

The number of households growing Irish potatoes in Iringa region was 44,849. This was 72.9 percent of the total root and tuber crop growing households during the wet season. The area planted with Irish potatoes was larger than any other root and tuber crop in the region accounting for 76.3 percent of the total planted area of root and tuber crops. Njombe District has the largest planted area for Irish potatoes (9,981 ha, 54.9% of the total Irish potato planted area in the region), followed by Makete (5,579 ha, 30.7%), Mufindi (1,051 ha, 5.8%), Kilolo (893 ha, 4.9%), Ludewa (614 ha, 3.4%) and Iringa Rural (60 ha, 0.3 %). Irish potatoes are not grown in Iringa Urban district. There are significant variations in the average area

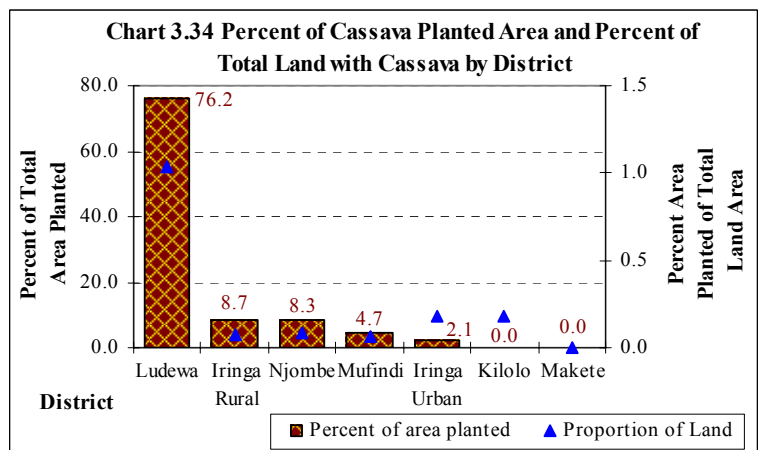
planted per Irish potato growing household among the districts ranging from 0.13 ha in Iringa Rural to 0.49 ha in Njombe district (Chart 3.31). Although there is no data available to facilitate time series analysis for this crop, the area under Irish potato production has expanded from 973 ha in 1995 to 18,178 ha in 2003 (Chart 3.32).

3.3.5.2 Cassava

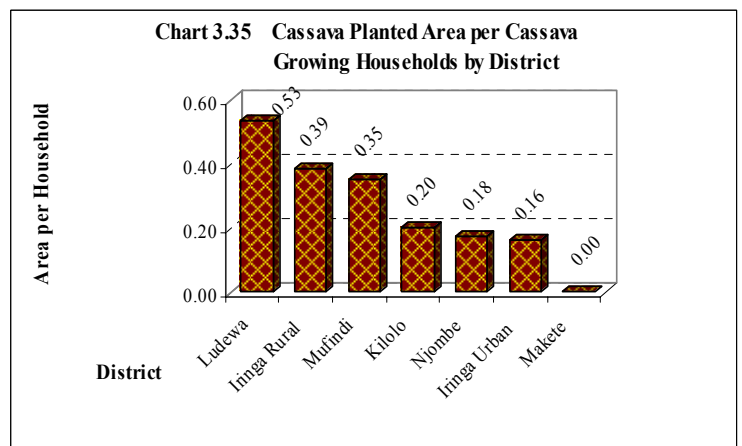
The number of households growing cassava in the region was 11,204. This represents 4 percent of the total crop growing households in the region. The total production of cassava during the census year was 7,124 tonnes from a planted area of 4,737 hectares resulting in a yield of 1.5 tons per hectare. The area planted with cassava increased from 1,252 hectares in 1994/95 to 18,971 ha in 1997/98, however the planted area decreased sharply to 4,737 hectares in 2002/03 (Chart 3.33).



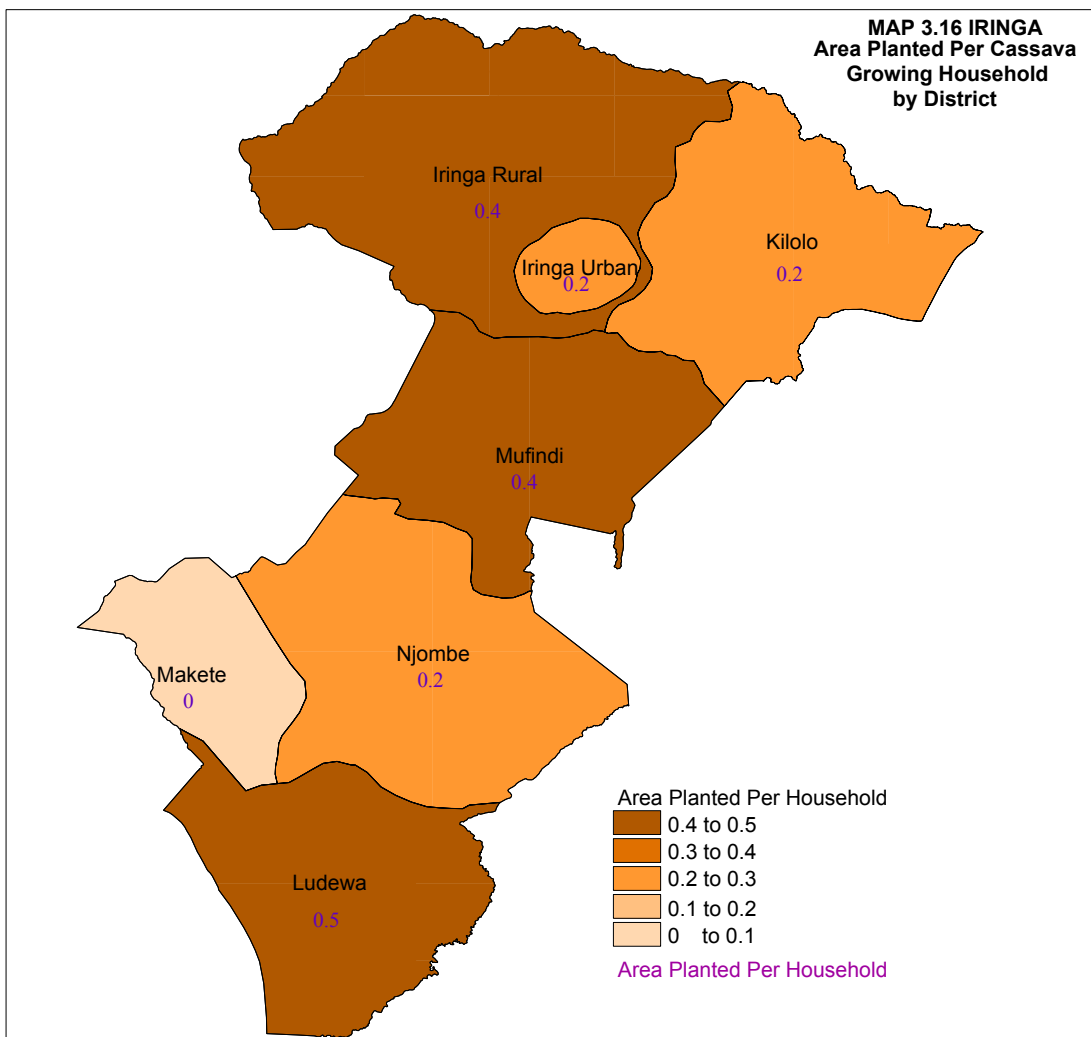
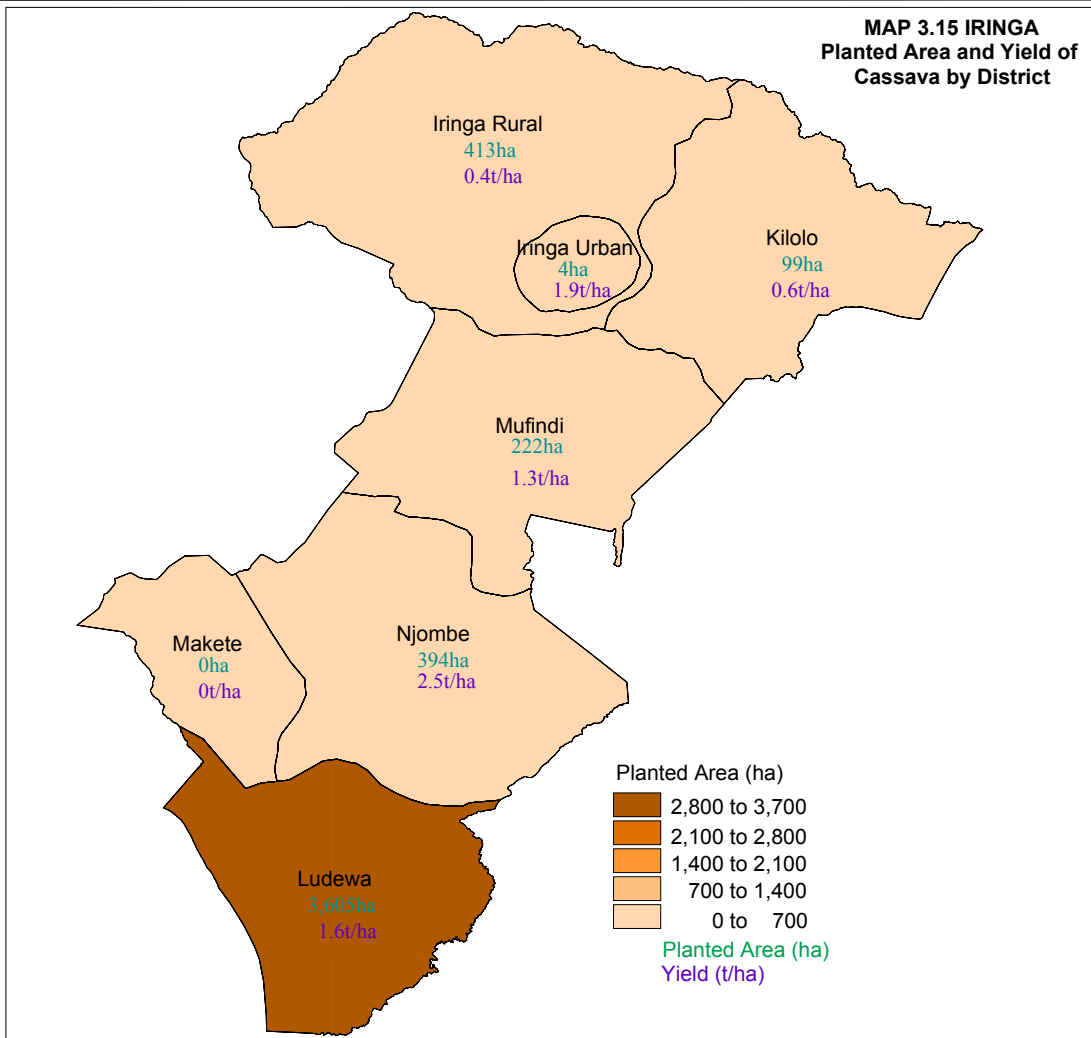
Ludewa district had the largest planted area of cassava in Iringa region with 3,605 ha (76% of the total cassava planted area in the region), followed by Iringa Rural (413 ha, 9%), Njombe (394 ha, 8%), Mufindi (222 ha, 5%), Iringa Urban (99 ha, 2%) and Kilolo (4 ha, 0.01%) (Map 3.15). No cassava was grown in Makete district. The proportion of land planted with cassava, expressed as a percent of the total land area was very small in Morogoro region, however the highest proportion was found in Ludewa district (1.033%). This was followed by Morogoro Urban (0.178%), Mufindi (0.178%), Kilolo (0.075%), Njombe (0.089%), Morogoro Rural (0.075%) and Mufindi (0.059%) (Chart 3.35).



The average planted area per cassava growing household was 0.4 hectares, however, there were small district variations. The area planted per cassava growing household was largest in Ludewa (0.53 ha) followed by Iringa Rural (0.39 ha), Mufindi (0.35 ha), Kilolo (0.20 ha), Njombe (0.18 ha) and Iringa Urban (0.16 ha) (Chart 3.35 and Map 3.16).



The area planted with cassava accounted for 19.9 percent of the total area planted with roots and tuber crops or 1.1 percent of the total area planted with annual crops and vegetables during the census year.

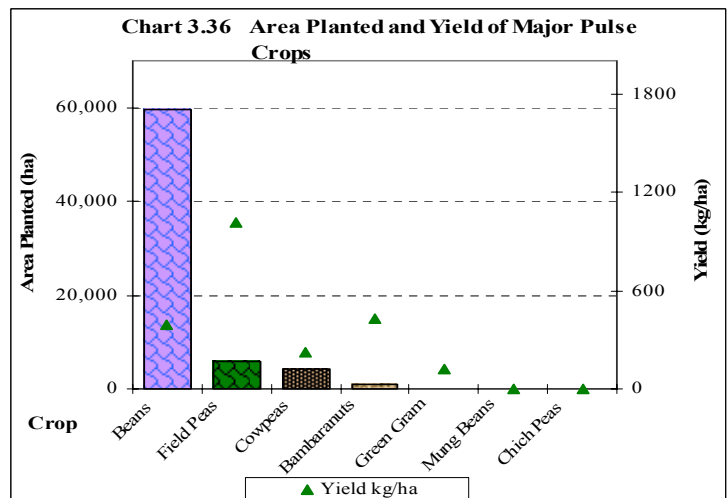


3.3.6 Pulse Crops Production

The total area planted with pulses was 70,483 hectares, of which 59,661 hectares were planted with beans, which accounted for 84.6 percent of the total area planted with pulses, followed by field peas (5,769 ha, 8.2%), cow peas (4,112 ha, 5.8%), bambaranuts (848 ha 1.2%) green gram (89 ha, 0.13%), mung beans and (4 ha, 0.01%). Chick peas were not cultivated in the region. The total production of pulses was 30,640 tonnes.

Crop	Area Planted (ha)	Quantity Harvested (Tonnes)	Yield kg/ha	Total		
				Area Planted	Quantity Harvested	Yield kg/ha
Beans	59,661	23,479	394	59,661	23,479	394
Field Peas	5,769	5,851	1014	5,769	5,851	1014
Cowpeas	4,112	934	227	4,112	934	227
Bambaranuts	848	364	429	848	364	429
Green Gram	89	10	117	89	10	117
Mung Beans	4	0	0	4	0	0
Chich Peas	0	0	0	0	0	0
Total	70,483	30,640		70,483	30,640	

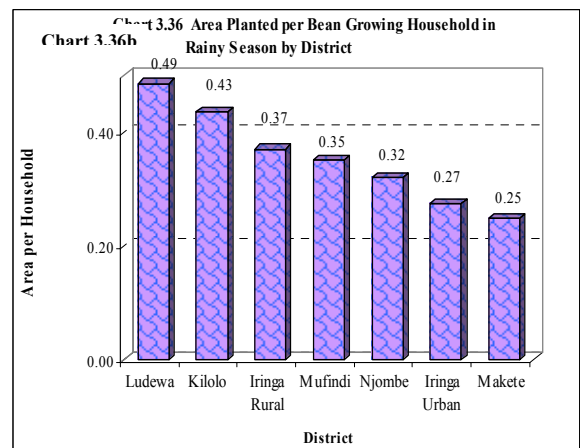
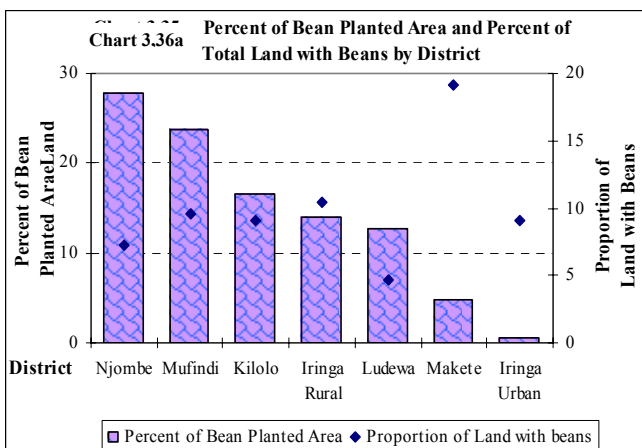
Beans were the most cultivated crop producing 23,479 tonnes which accounted for 76.6 percent of the total pulse production. This was followed by field peas (5,851t, 19.1%), cow peas (934t, 3.0%), bambara nuts (364t, 1.2%), and green gram (10t, 0%). No mung beans production was reported in the region. Field peas and bambara nuts had a relatively high yields of 1,014 and 429 kgs/ha respectively. The yields of the rest of the pulse crops in kilograms per hectare were beans (394 kgs/ha), cowpeas (227 kgs/ha) and green gram (117 kgs/ha) (Chart 3.36).



3.3.6.1 Beans

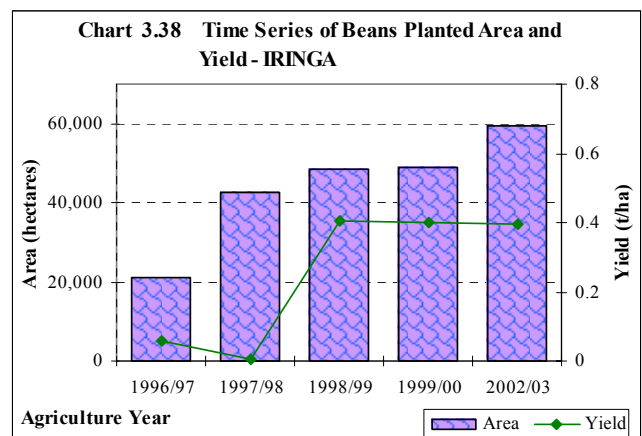
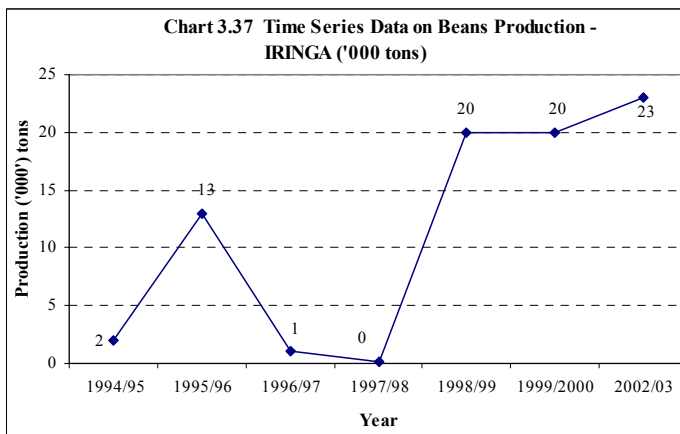
Beans dominate the production of pulse crops in the region. The number of households growing beans in Iringa region was 165,191. The total production of beans in the region was 23,479 tonnes from a planted area of 59,661 hectares resulting in an average yield of 0.4 t/ha.

Njombe District had the largest area planted with beans in the region (16,569 ha, 27.8%), however the largest area planted with beans per bean growing household in the long rainy season was in Ludewa district (0.49 ha) (Charts 3.36a and Map 3.17).



The average area planted per bean growing household in the region during the rainy season was 0.4 ha. Two districts of Ludewa and Kilolo had the average area planted per households above the regional average (0.49 ha and 0.43 ha respectively) (Chart 3.36b and Map 3.18).

Bean production in Iringa region increased dramatically from almost zero in 1998 to 20,000 tonnes in 1999 after which the production has remained more or less constant (Chart 3.37). Charts 3.37 and 3.38 show that the increase in production was mainly due to an increase in planted area and to a lesser extent an increase in productivity. Bean production responded more from an increase in planted area compared to maize production as the level of yield in beans was maintained due to the plants inherent ability to manufacture nitrogen.



The area planted with beans has increased rapidly from 1997 to 1998, after which it increased steadily from 1986 to 2003. Over the period 1999 to 2003 the yield of beans remained constant at around 0.4 t/ha.

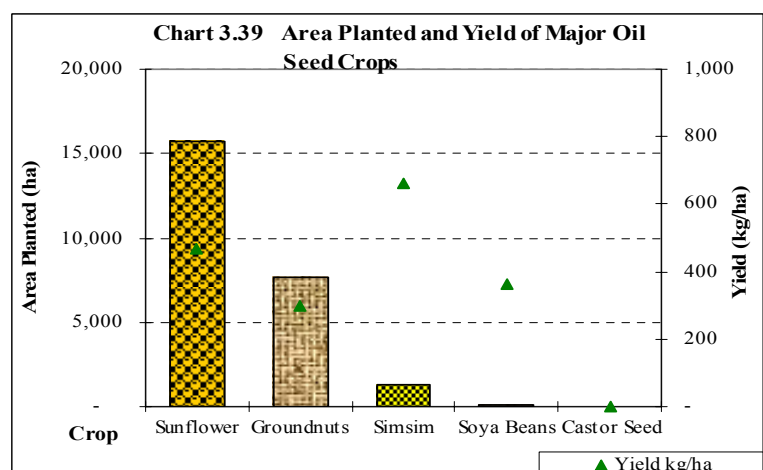
3.3.7 Oil Seed Production

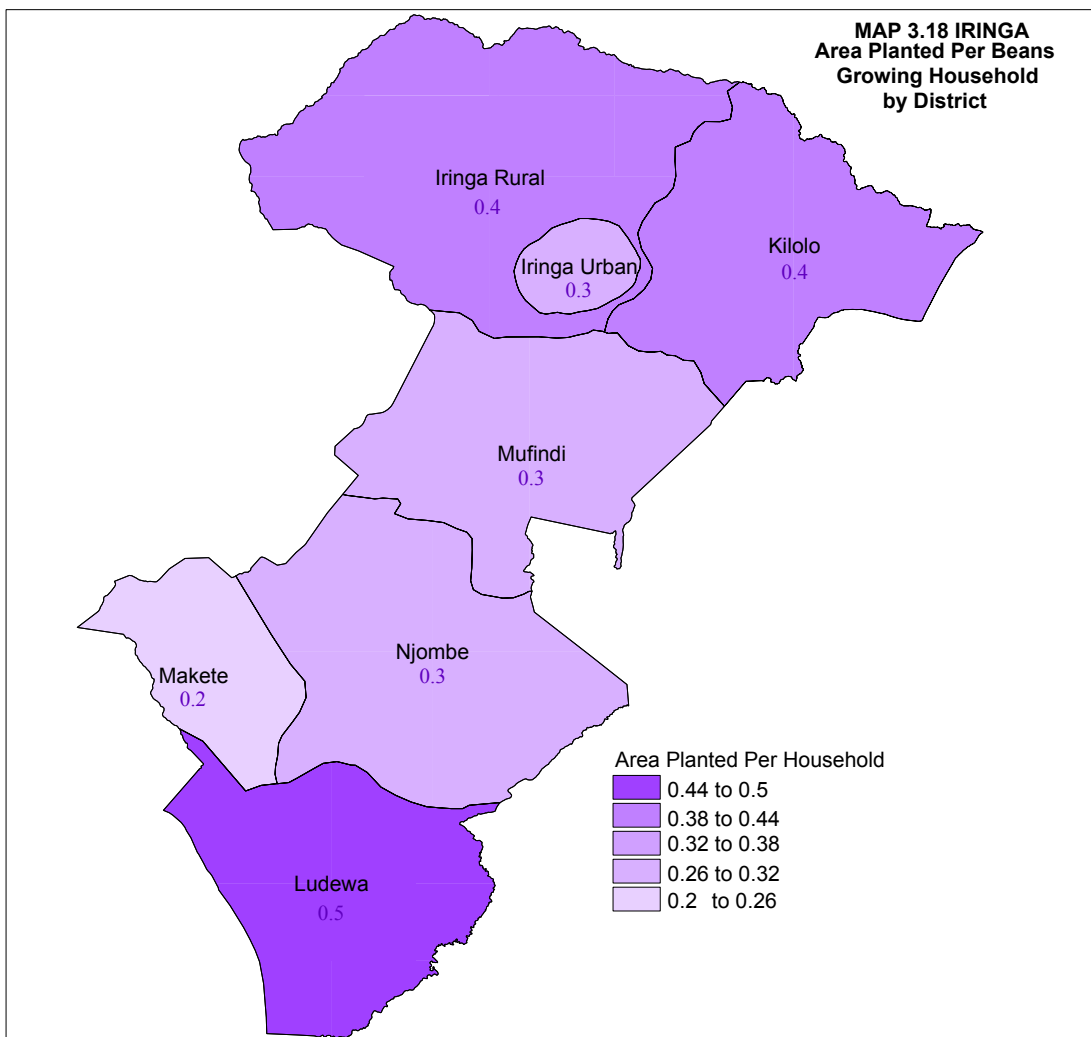
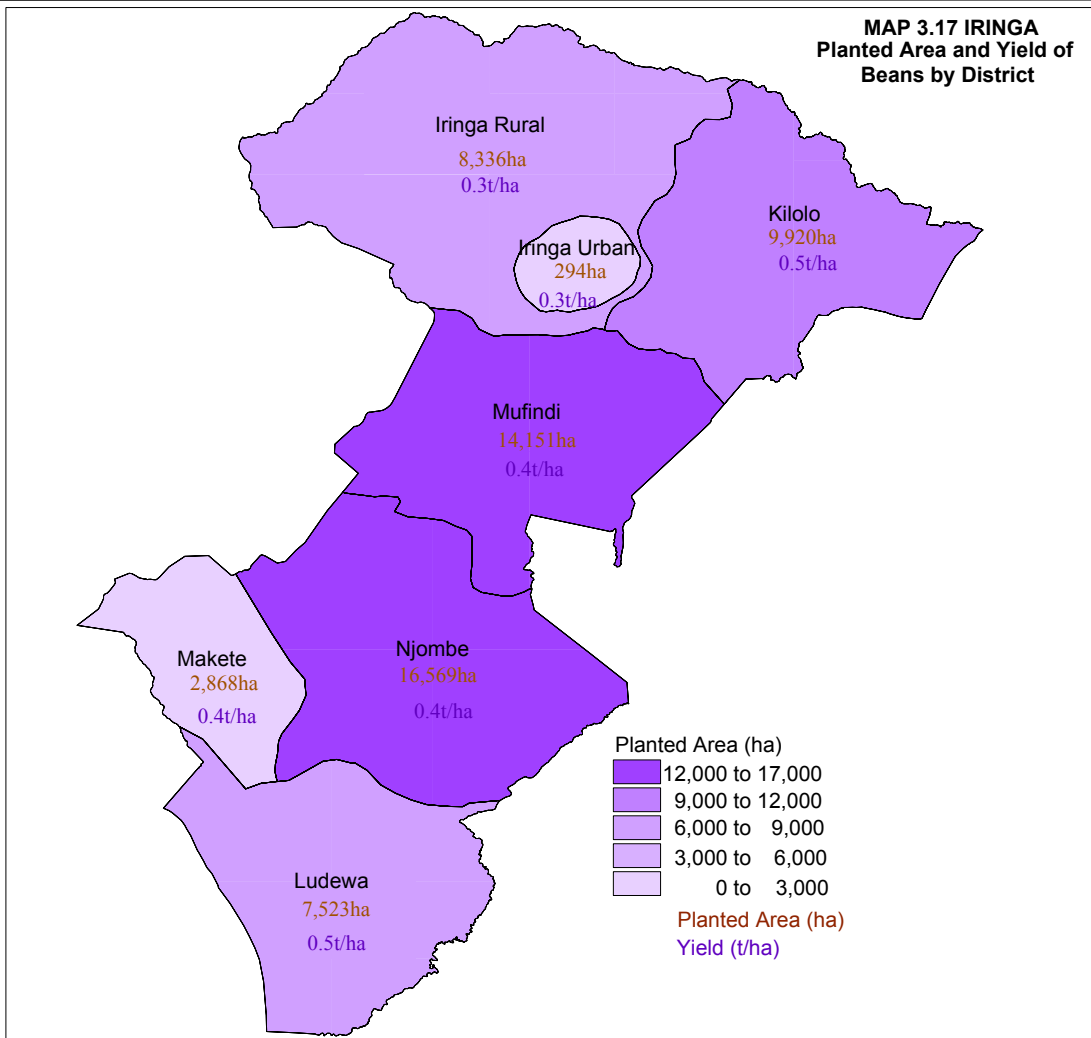
The total production of oilseed crops was 10,526 tonnes from a planted area of 24,718 hectares. Sunflower was the most dominant oil seed crop with a planted area 15,674 hectares (63.4% of the total area under oil seed crops), followed by groundnuts (7,650 ha, 31%), simsim (1,245 ha, 5%) and soya beans (148 ha, 0.6%) (Table 3.5). The yield of simsim was 660 kg/ha, sunflower was 470 kg/ha, soya beans was 362 kg/ha and for groundnuts it was 299 kg/ha.

In terms of production, sunflower was the dominant oil seed crop in the region with 7,366 tonnes which accounted for 70 percent of the total production of oil seed crops, followed by groundnuts (2,285 tonnes, 22%), simsim (822 tonnes, 8%) and soya beans (54 tonnes, 0.5%) (Chart 3.39).

Table 3.5 Area, Production and Yield of Oil Seed Crops - Long Rainy Season

Crop	Area planted (ha)	Production (tons)	Yield kg/ha
Sunflower	15,674	7,366	470
Groundnuts	7,650	2,285	299
Simsim	1,245	822	660
Soya Beans	148	54	362
Total	24,718	10,526	

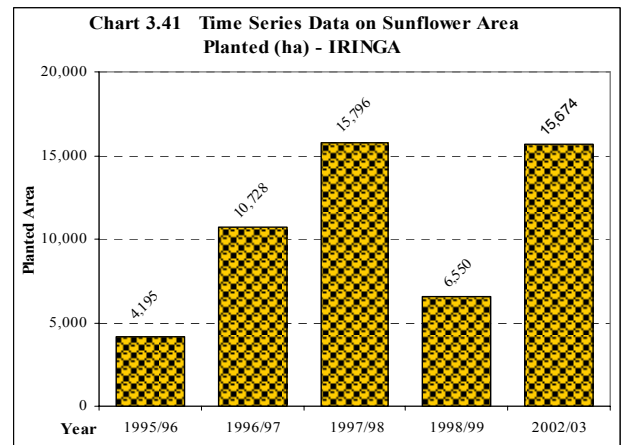
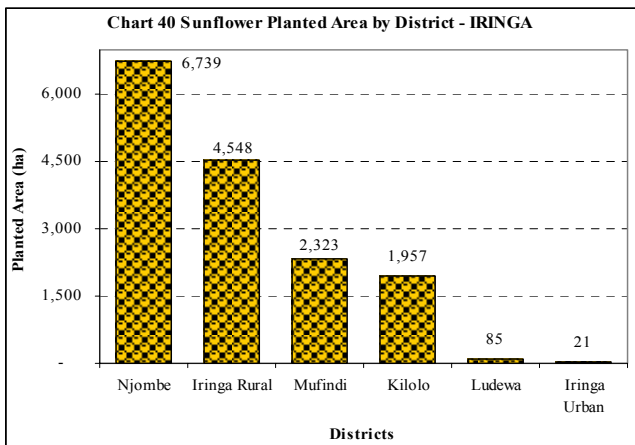




3.3.7.1 Sunflower

The number of households that grew sunflower in Iringa was 37,496. Njombe district had the largest planted area with 6,739 hectares (43% of the total area planted with the sunflower in the region) followed by Iringa Rural (4,548 ha, 29%), Mufindi (2,323 ha, 15%), Kilolo (1,957 ha, 12.5%), Ludewa (85 ha, 0.5%) and Iringa Urban (21 ha, 0.1%) (Chart 3.40). Production was 7,366 tonnes from a planted area of 15,674 hectares resulting in the average yield of 0.5 t/ha.

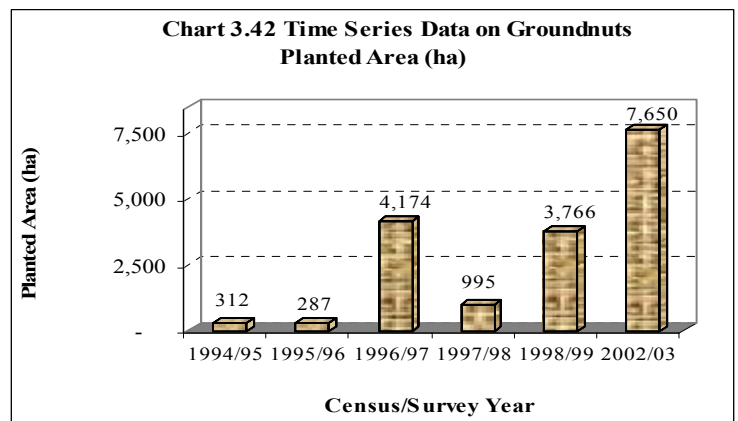
The area planted with sunflower has increased rapidly from 4,195 ha in 1996 to 15,796 ha in 1998, after which it decreased sharply to 6,550 ha in 1999. This sharp decrease may be attributed to small numbers. However, by 2003 the planted area increased to 15,674 ha (Chart 3.41).



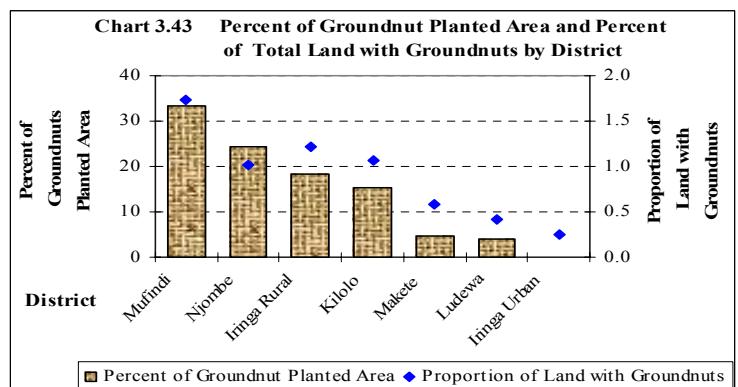
3.3.7.2 Groundnuts

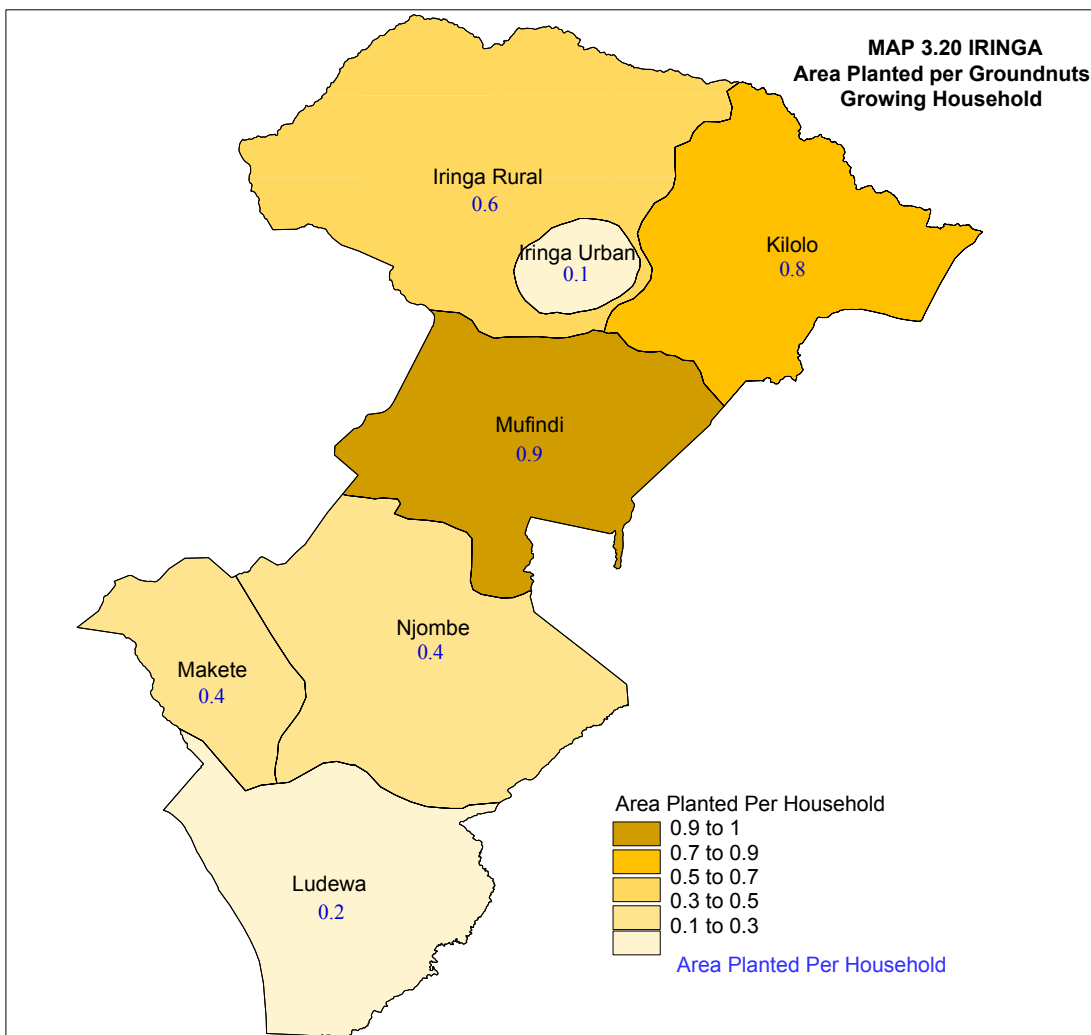
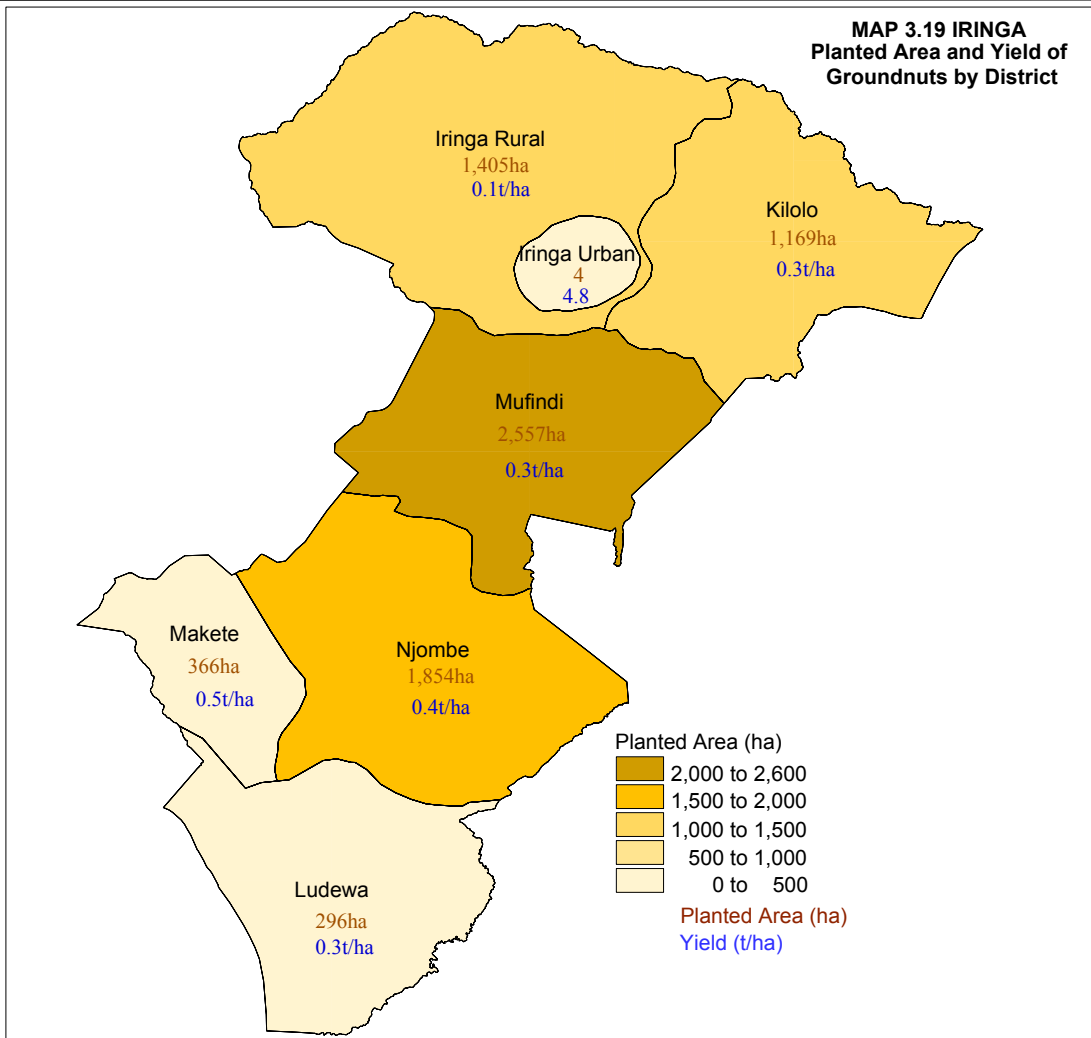
The number of households growing groundnuts in Iringa region was 14,001. The total production of groundnuts in the region was 2,285 tonnes from a planted area of 7,650 hectares resulting in an average yield of 0.3 tons per hectare.

Although the groundnut planted area is small, there appears to be an increasing trend over the period 1997 to 2003 (Chart 3.42).

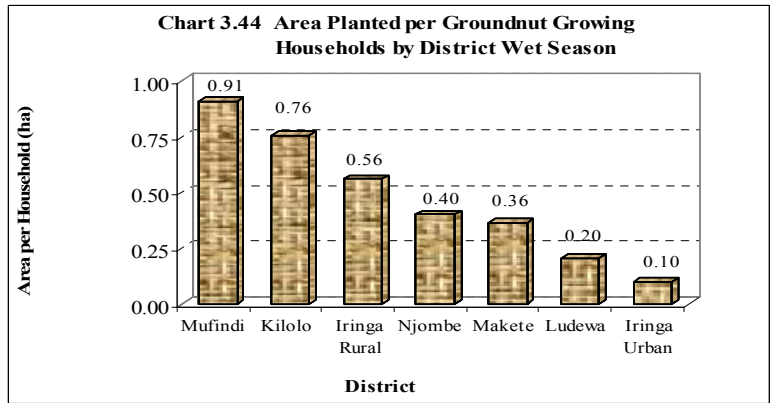


Thirty three percent of the area planted with groundnuts in Iringa region was located in Mufindi District with 2,557 hectares, followed by Njombe (1,854 ha, 24%), Iringa Rural (1,405 ha, 18.4%), Kilolo (1,169 ha, 15.3%), Makete (366 ha, 5%), Ludewa (296 ha, 3.9%) and Iringa Urban (4 ha, 0.05%) (Map 3.19). The highest proportion of land with groundnuts was found in Mufindi followed by Iringa Rural, Kilolo, Njombe, Makete, Ludewa and Iringa Urban (Chart 3.43).





There are large variations in the area planted per groundnut growing household among districts in Iringa region. The largest planted area per groundnut growing household was found in Mufindi district (0.91 ha), followed by Kilolo (0.76 ha), Iringa Rural (0.56 ha), Njombe (0.40 ha), Ludewa (0.20 ha) and Iringa Urban (0.10) (Chart 3.44 and Map 3.20).

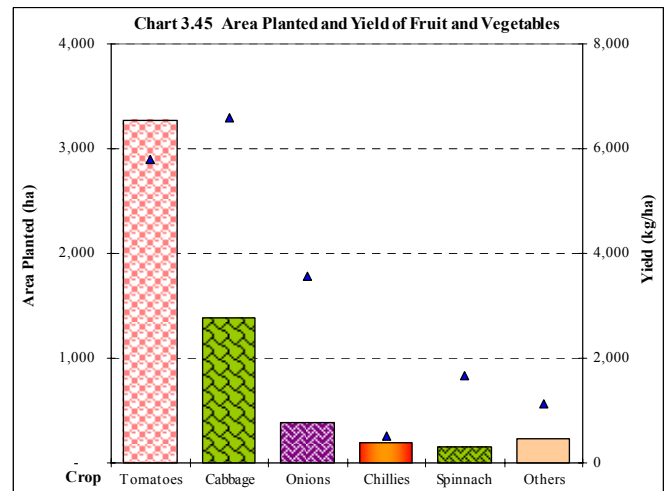


3.3.8 Fruit and Vegetables

The collection of fruit and vegetables production data was difficult due to the small quantities produced per household. Most of the data presented here gives the production of smallholders who grew these crops as cash crops and not merely for household consumption.

The total production of fruit and vegetables was 30,084 tonnes. The most cultivated fruit and vegetable crop was tomatoes with a production of 18,991 tonnes (63% of the total fruit and vegetables produced in the region), followed by cabbage (9,098t, 30%) and onions (1,371t, 5%). The production of the other fruit and vegetable crops was relatively small (Tab 3.6).

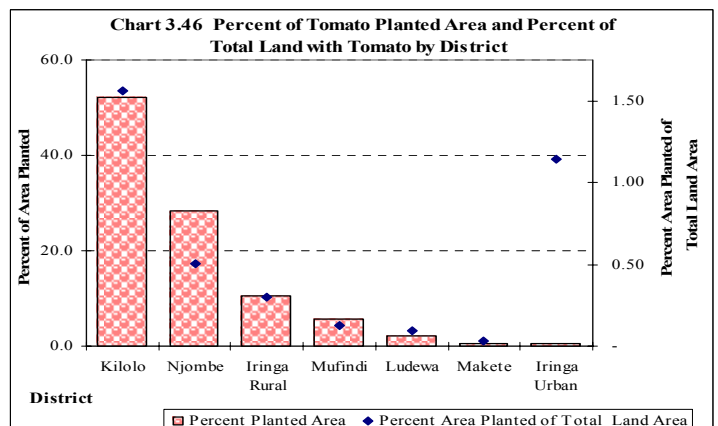
Crop	Area Planted(ha)	Quantity harvested(tons)	Yield t/ha
Tomatoes	3,274	18,991	5.8
Cabbage	1,380	9,098	6.6
Onions	386	1,371	3.6
Chillies	196	101	0.5
Spinnach	154	254	1.6
Pumpkins	111	83	0.7
Amaranths	86	145	1.7
Okra	21	10	0.5
Ginger	12	13	1.1
Carrot	3	6	2.0
Water Mellon	2	1	0.5
Egg Plant	1	11	11.0
Total	5,625	30,084	



The yield of tomatoes was 5.8t/ha, 6.6 t/ha, for cabbage, and 3.6 t/ha for onions, 0.5 t/ha, for chillies and 1.6 for spinach (Chart 3.45).

3.3.8.1 Tomatoes

The number of households growing tomatoes in the region during the wet season was 11,796. This represents 4.2 percent of the total crop growing households in the region. Kilolo district had the largest planted area of tomatoes (52% of the total area planted with tomatoes in the region), followed by Njombe (28%), Iringa Rural (10%), Mufindi (6%), Ludewa (2%), Makete (1%) and Iringa Urban (1%) (Map 3.21).



The proportion of land planted with tomatoes, expressed as a percent of the total land area was very small in Morogoro region, however the highest proportion was also found in Kilolo district (1.6%), followed by Iringa Urban (1.1%), Njombe (0.5%), Iringa Rural (0.3%), Mufindi (0.1%), Ludewa (0.1%) and Makete (0.0%). The high percent of area planted of total land area in Iringa Urban district may be attributed to small numbers (Chart 3.46).

The average planted area per tomato growing household was 0.5 hectares, however, there were small district variations. The area planted per tomato growing household was largest in Kilolo (0.52 ha) followed by Mufindi (0.24 ha), Iringa Urban (0.23 ha), Iringa Rural (0.22 ha), Njombe (0.19 ha), Makete (0.10 ha) and Ludewa (0.08 ha) (Chart 3.47 and Map 3.22).

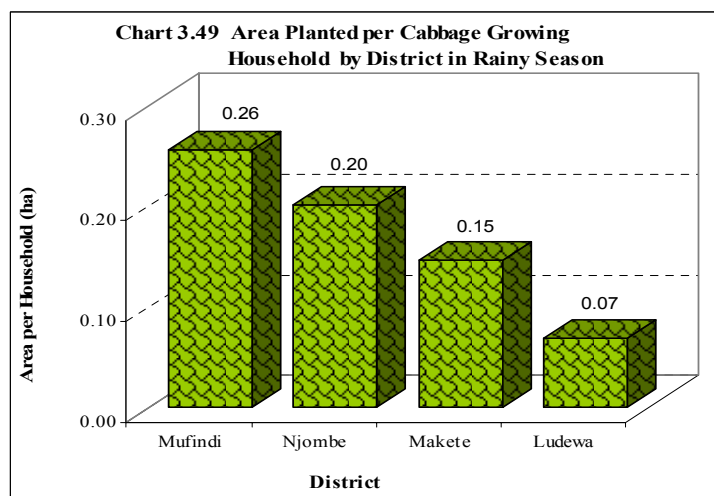
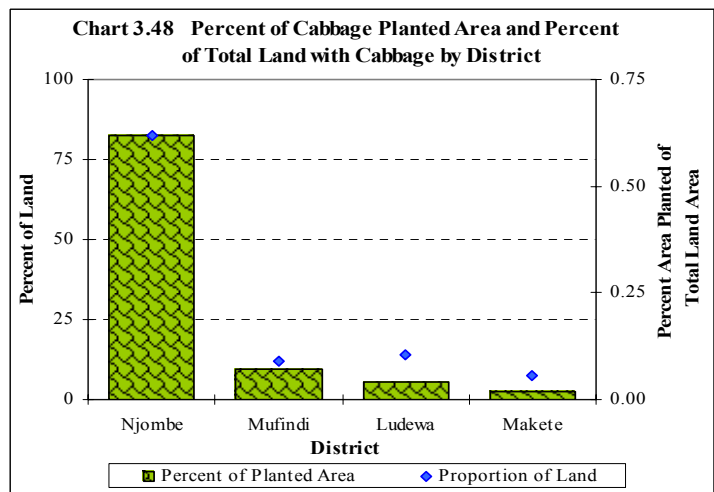
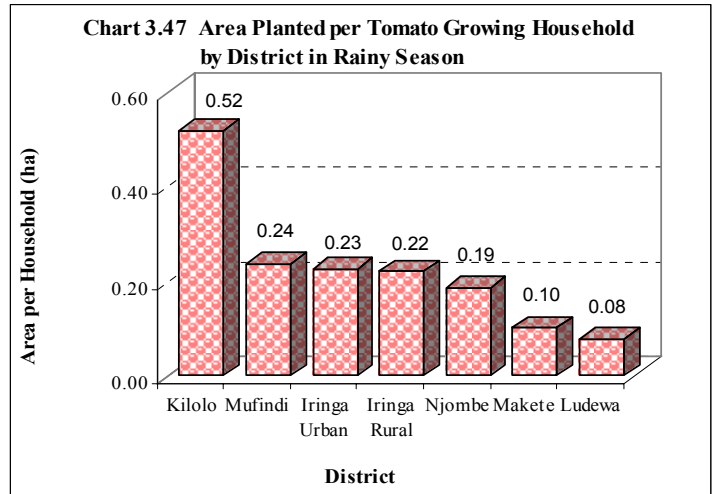
3.3.8.2 Cabbage

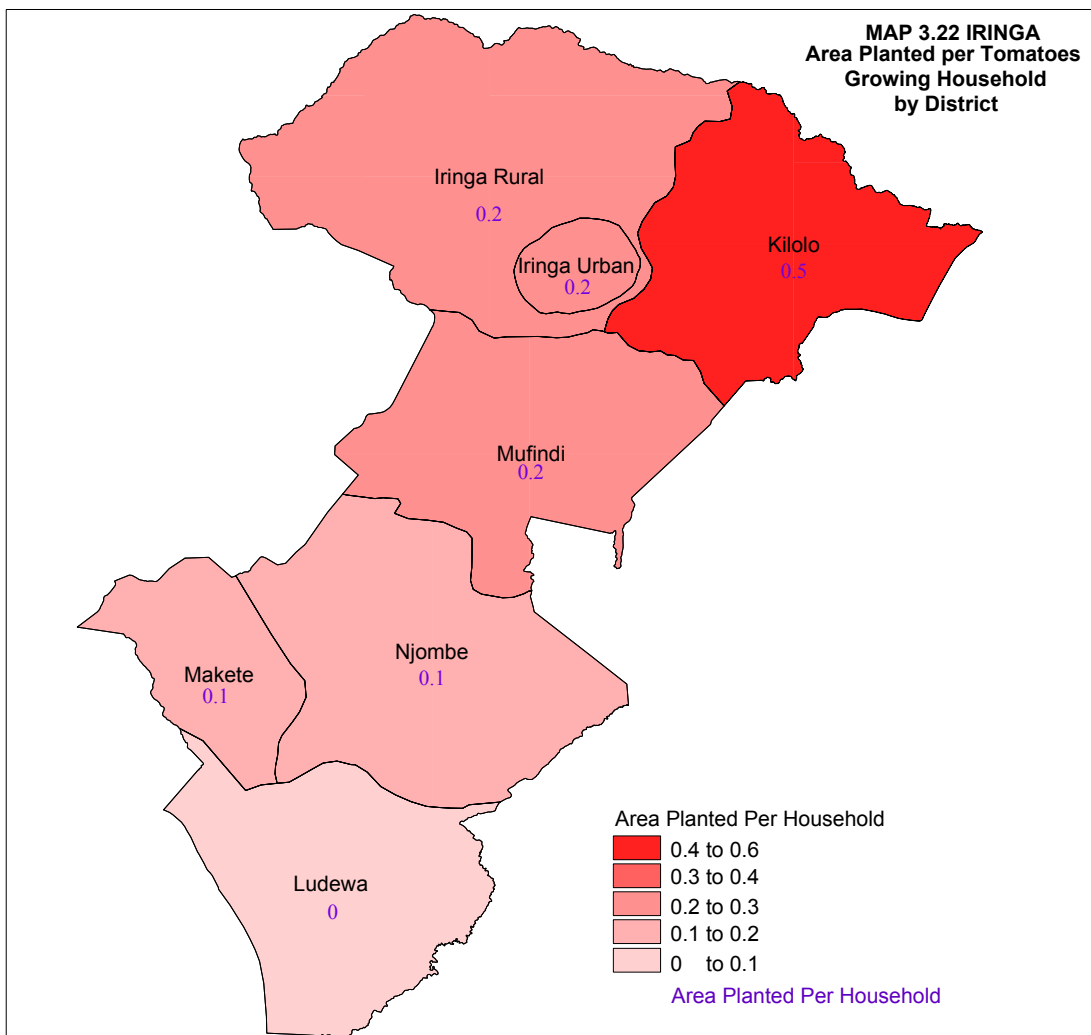
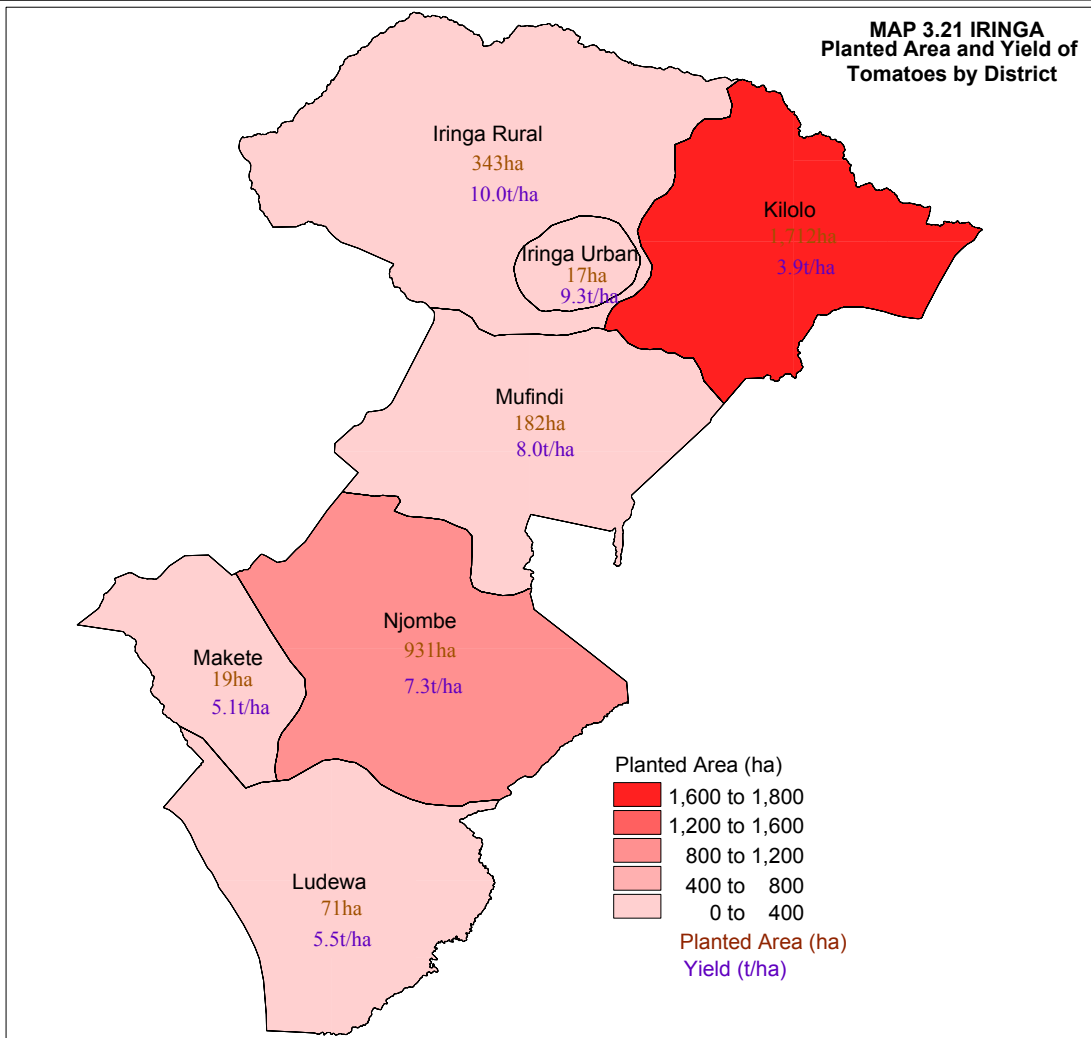
The number of households growing cabbages in the region during the wet season was 7,478. This represented 2.7 percent of the total crop growing households in Iringa region.

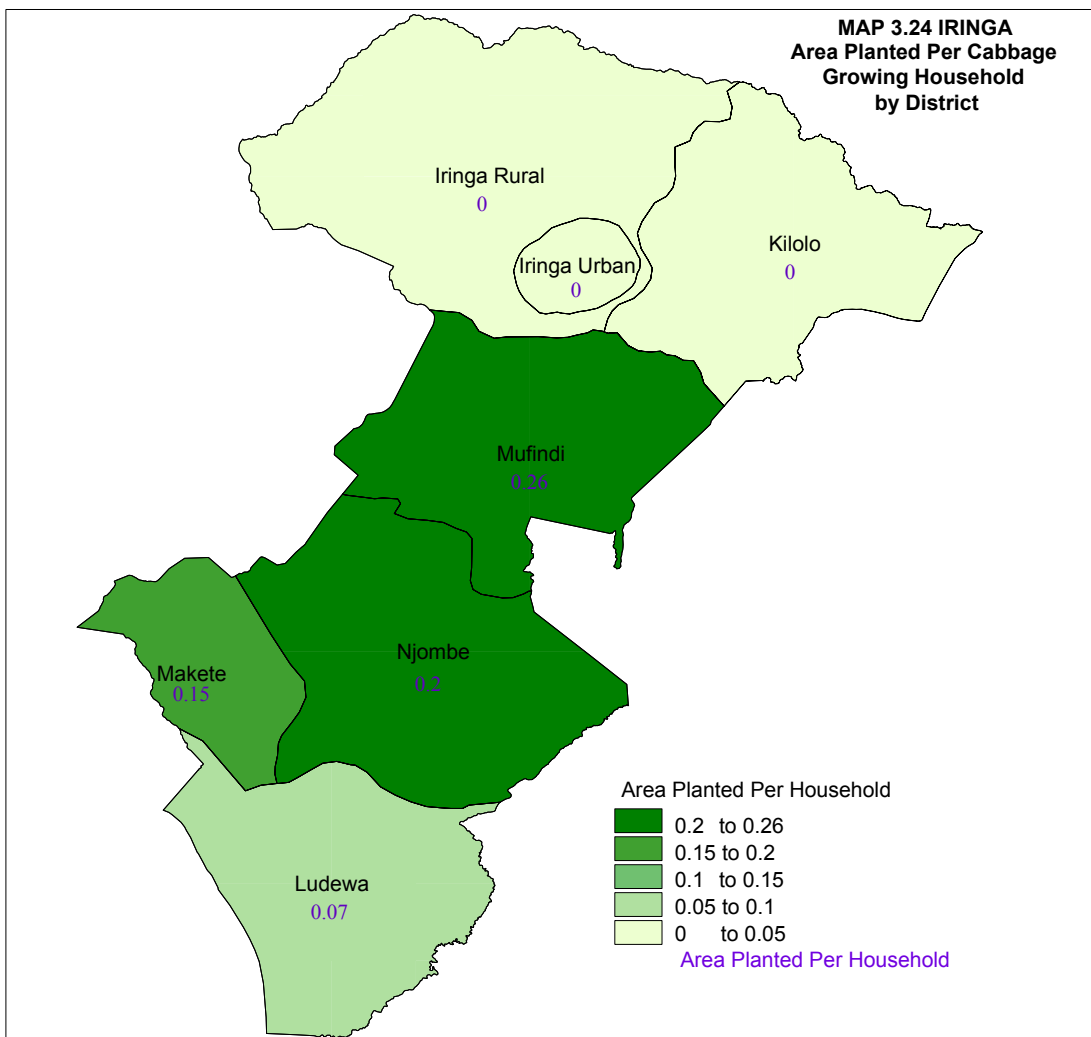
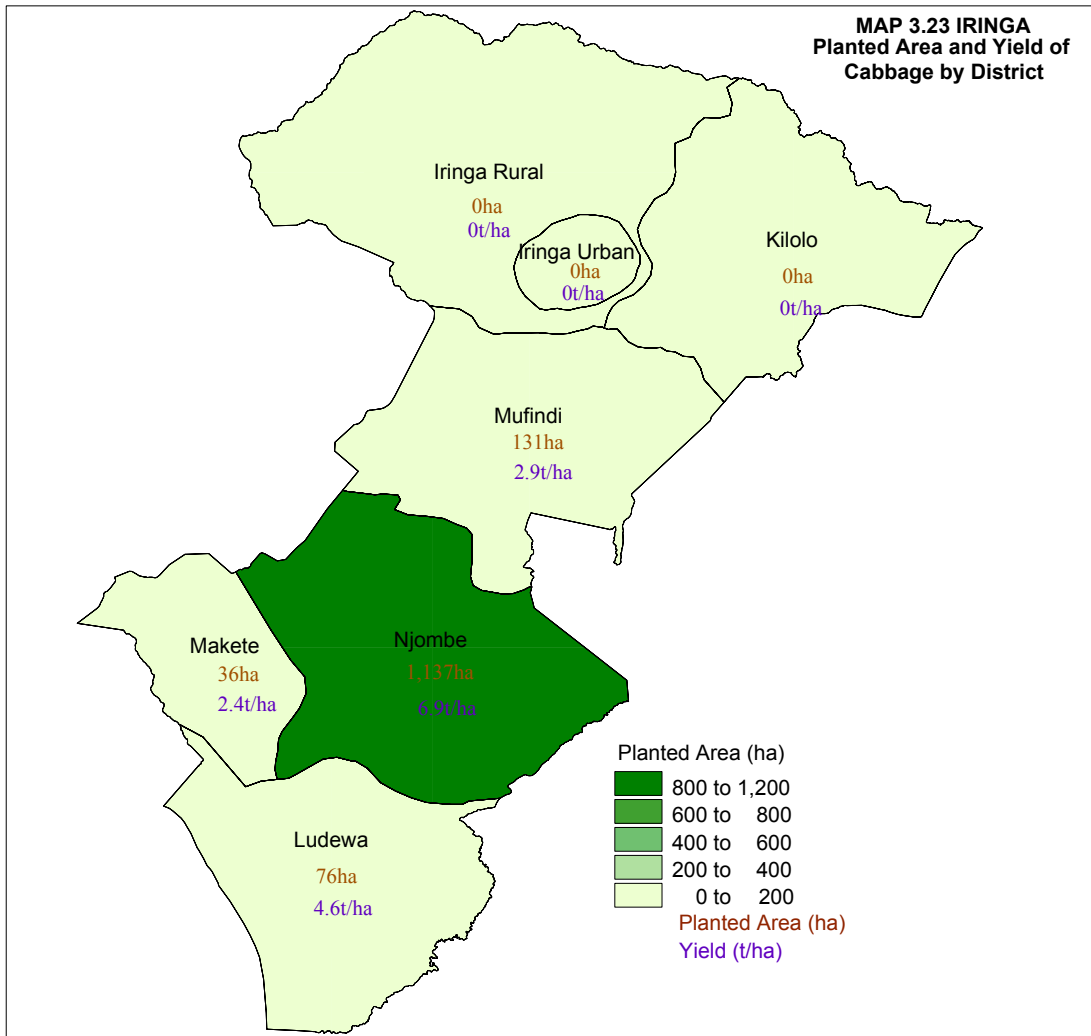
The total area planted with cabbages accounted for 24.5 percent of the total area planted with fruits and vegetables during the wet season. Njombe district had the largest planted area of cabbage (1,137 ha, 82% of the total area planted with cabbage in the region), followed by Mufindi (131 ha, 9.6%), Ludewa (76 ha, 6%) and Makete (36 ha, 3%). No cabbage was grown in Iringa Rural, Iringa Urban and Kilolo districts (Map 3.23).

The proportion of land planted with cabbage, expressed as a percent of the total land area was very small in the region, however the highest proportion was found in Njombe district (0.62%), followed by Ludewa (0.10%), Mufindi (0.09%) and Makete (0.06%) (Chart 3.48 and Map 3.24).

The average planted area per cabbage growing household was 0.18 hectares, however, there were noticeable variations among districts. Though small the area planted per cabbage growing household was largest in Mufindi (0.26 ha), followed by Njombe (0.20 ha), Makete (0.15 ha) and Ludewa (0.07 ha) (Chart 3.49).

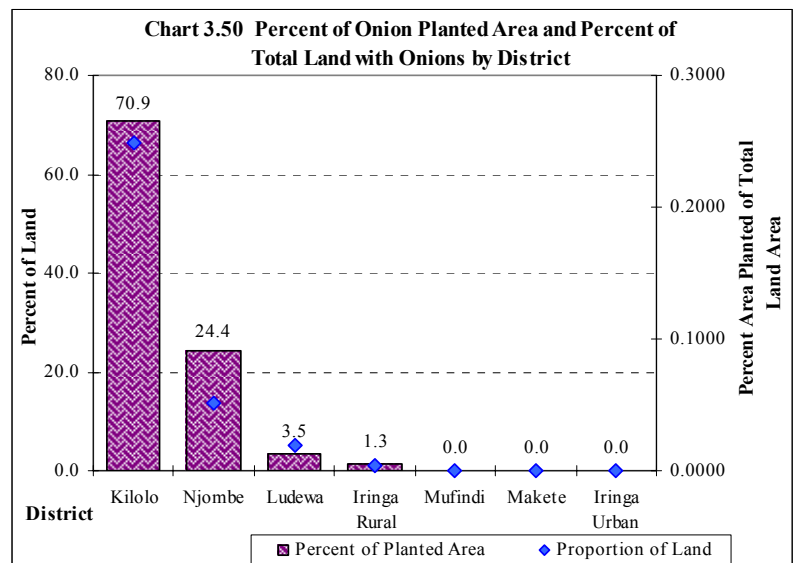






3.3.8.3 Onions

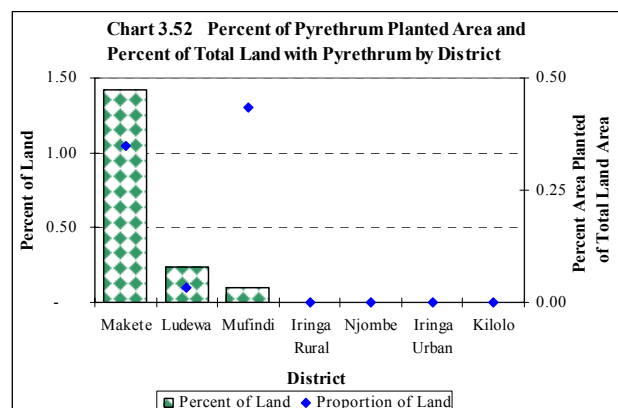
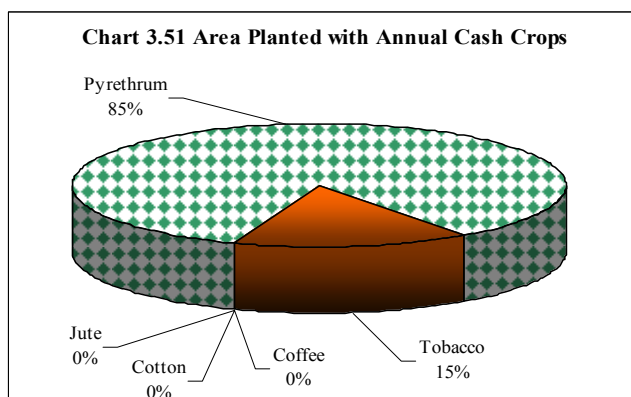
The number of households growing onions in the region during the wet season was 1,970. This represents 0.71 percent of the total crop growing households in Iringa region. Kilolo district had the largest planted area with onions (273 ha, 70.9% of the total area planted with onions in the region), followed by Njombe (94 ha, 24.4%), Ludewa (14 ha, 3.5%) and Iringa Rural (5 ha, 1.3%). The largest proportion of the area planted with onions was found in Kilolo district (0.25), followed by Njombe (0.05%), Ludewa (0.02%), and Iringa Rural (0.004%) (Chart 3.50).



Other fruit and vegetable crops are either not grown or grown in small quantities.

3.3.9 Other Annual Crop Production

Most of the other annual crops are cash crops. An area of 397 hectares was planted with other annual crops and pyrethrum was the most prominent with (336 ha, 85% of the total area planted with other crops in the region), followed by tobacco (61 ha, 15%).

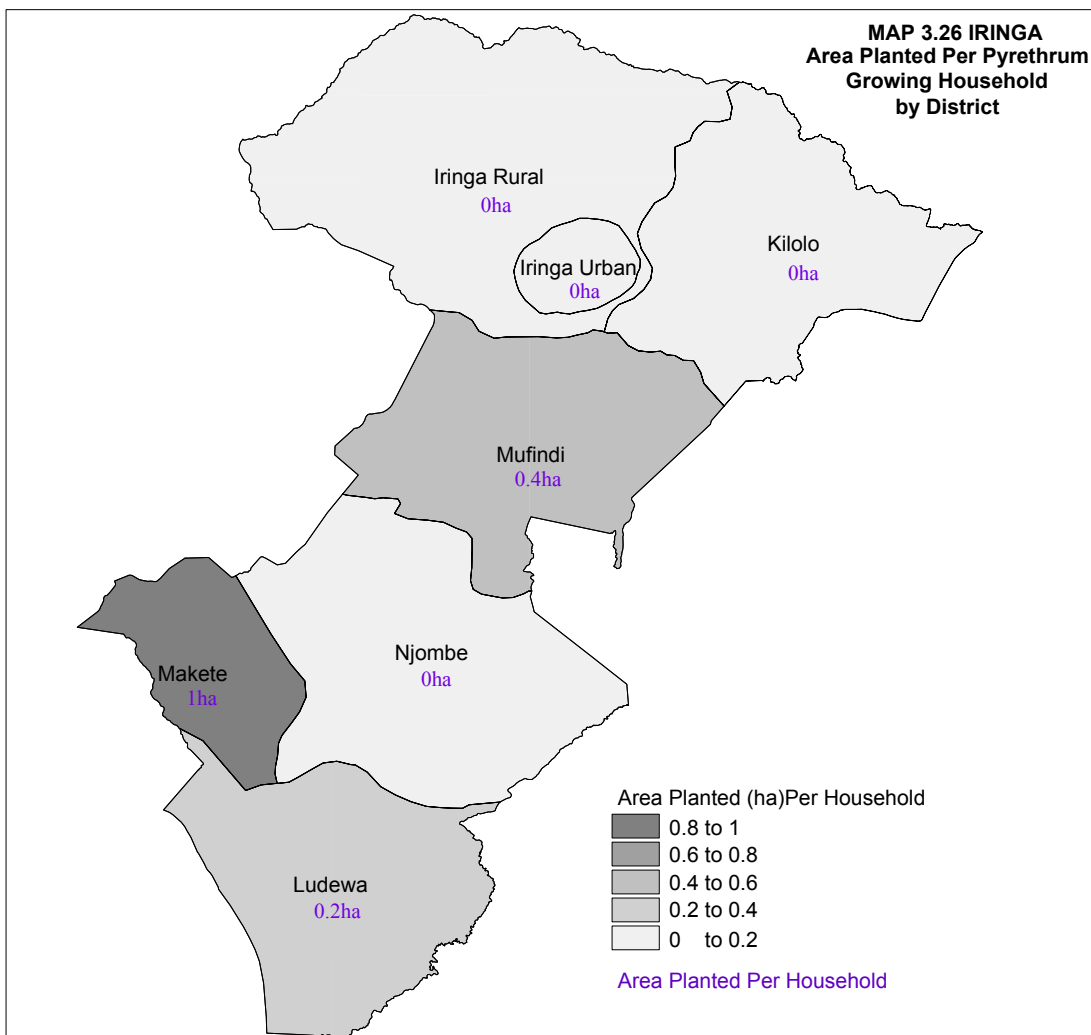
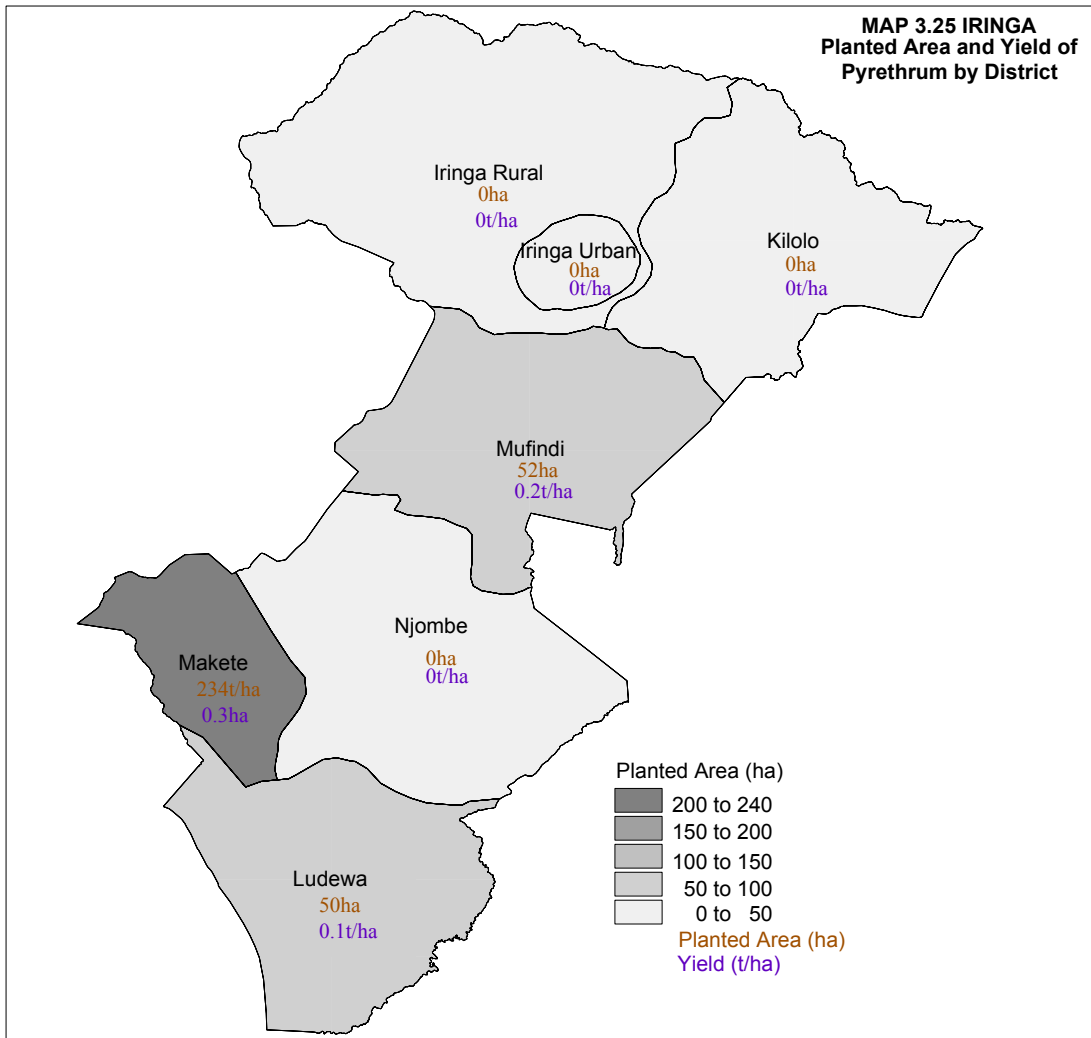


3.3.9.1 Pyrethrum

The area planted with pyrethrum was 336 hectares with a production of 90 tonnes. Makete district had largest area planted with pyrethrum (236 ha, 70.2% of the total area planted with pyrethrum in the region), followed by Mufindi (52 ha, 15.5%) and Ludewa (50 ha, 14.9%) (Maps 3.25 and 3.26).

3.3.9.2 Tobacco

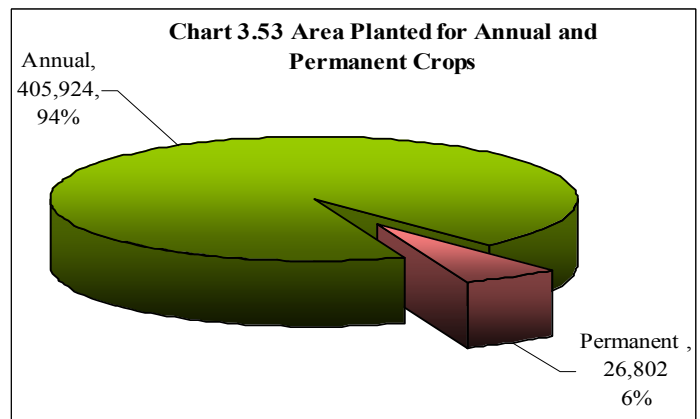
Tobacco was produced in Iringa Rural district only. A total number of 116 agricultural households grew 61 hectares. The average planted area of tobacco per agricultural household was 0.53 hectares.



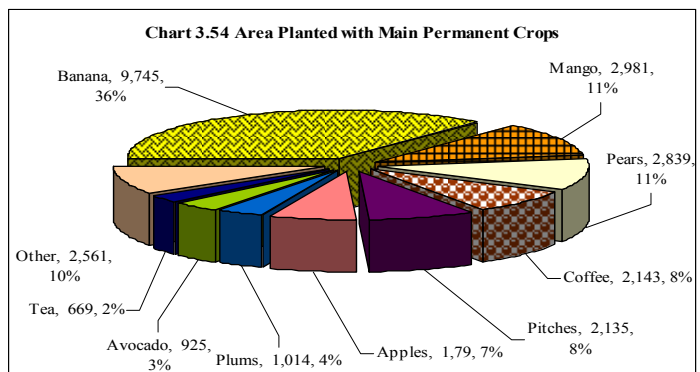
3.4 Permanent Crops

Permanent crops (sometimes referred as perennial crops) are crops that normally take over a year to mature and once mature can be harvested for a number of years. For most crops, it is easy to determine if they are annual or permanent. However, for crops like cassava and bananas the distinction is not so clear. Cassava has varieties that mature within a year and produces only one harvest, whilst other varieties survive for more than one year and produce several harvests. In this census, cassava was treated as an annual crop. Conversely, bananas normally take less than a year to mature but survive for more than one year and are thus treated as a permanent crop. In this report, the results are presented for the most important permanent crops in terms of production and area planted. Previous censuses and surveys did not measure these variables for permanent crops, therefore no time series analysis is made in this section.

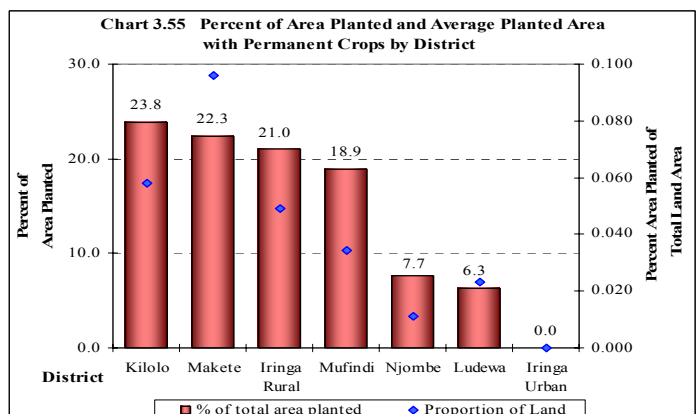
The planted area with permanent crops for smallholders was 26,802 hectares (6% of the planted area with crops in the region). However, the area planted with annual crops is not the actual physical land area as it includes the area planted more than once on the same land, whilst for the planted area for permanent crops is the same as physical planted land area. So the percentage of physical area planted with permanent crops is higher than indicated in Chart 3.53.



The most important permanent crop in Iringa region is the banana which accounts for a planted area of 9,745 hectares (36% of the planted area with permanent crops), followed by mango (2,981 ha, 11%), pears (2,839 ha, 10.6%), coffee (2,143 ha, 8%), pitches (2,135 ha, 8.0%), apples (1,791 ha, 6.7), plum (1,014ha, 3.8%), avocado (925 ha, 3.4% and tea (669 ha, 2.5%). Other permanent crops are grown in small quantities with a total of 2,561 ha (9.6%) (Chart 3.54).



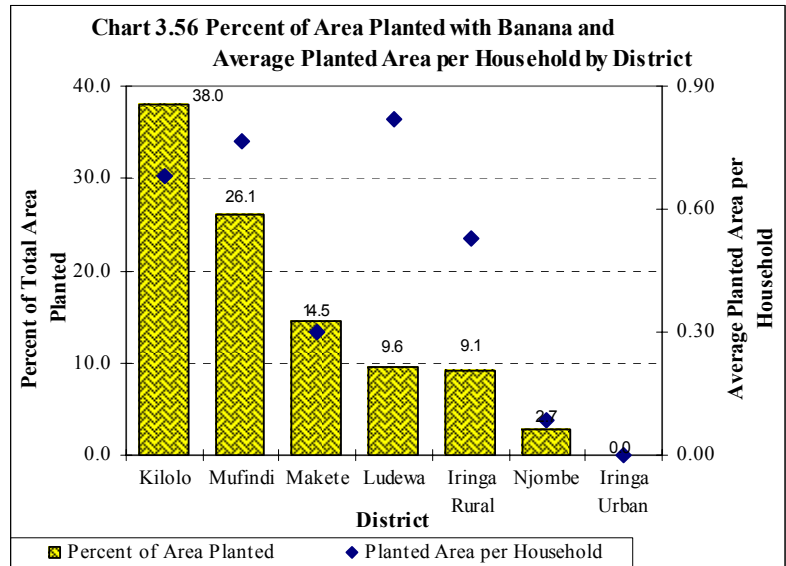
Kilolo district had the largest area under smallholder permanent crops (6,383 ha, 24%). This was followed by Makete (5,979 ha, 22%), Iringa Rural (5,633 ha, 21%), Mufindi (5,055 ha, 19%), Njombe (2,055 ha, 8%) and Ludewa (1,696 ha, 6%). Permanent crops were not grown in Iringa. Makete district had the largest planted area per permanent crop growing household (0.08 ha) followed by Kilolo (0.07 ha), Iringa Rural (0.06 ha), Mufindi (0.04 ha), Ludewa (0.03 ha) and Njombe (0.01 ha) (Chart 3.55). In terms of area of permanent crops planted expressed as a percentage of the total area planted with crops per district, Kilolo had highest proportion (23.8%) followed by Makete (22.3%), Iringa Rural (21.0%), Mufindi (18.9%), Njombe (7.7%) and Ludewa (6.3%).



3.4.1 Bananas

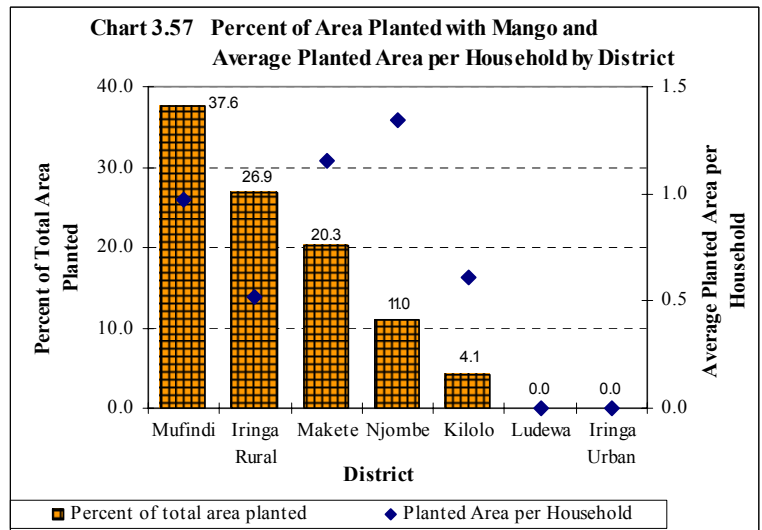
The total production of banana by smallholders was 10,244 tonnes. In terms of area planted, banana was the most important permanent crop grown by smallholders in Iringa region. It was grown by 19,428 agricultural households (7% of the total crop growing households in the region). The average area planted with banana per household in the region was relatively small (0.5 ha) and the average yield obtained by smallholders was 1,410 kg/ha from a harvest area of 7,263 hectares.

Kilolo had the largest planted area of banana in the region with 3,707 ha (38% of the total area with bananas in the region), followed by Mufindi (2,540 ha, 26.1%), Makete (1,415 ha, 14.5%), Ludewa (935 ha, 9.6%), Iringa Rural (883 ha, 9.1%) and Njombe (265 ha, 2.7%) (Map 3.27). There was no banana production in Iringa Urban district. The average area planted with banana per banana growing household was highest in Ludewa (0.82 t/ha), followed by Mufindi (0.77 ha), Kilolo (0.68 ha), Iringa Rural (0.53 ha), Njombe (0.30 ha) and Makete (0.30 ha) (Chart 3.56 and Map 3.28).



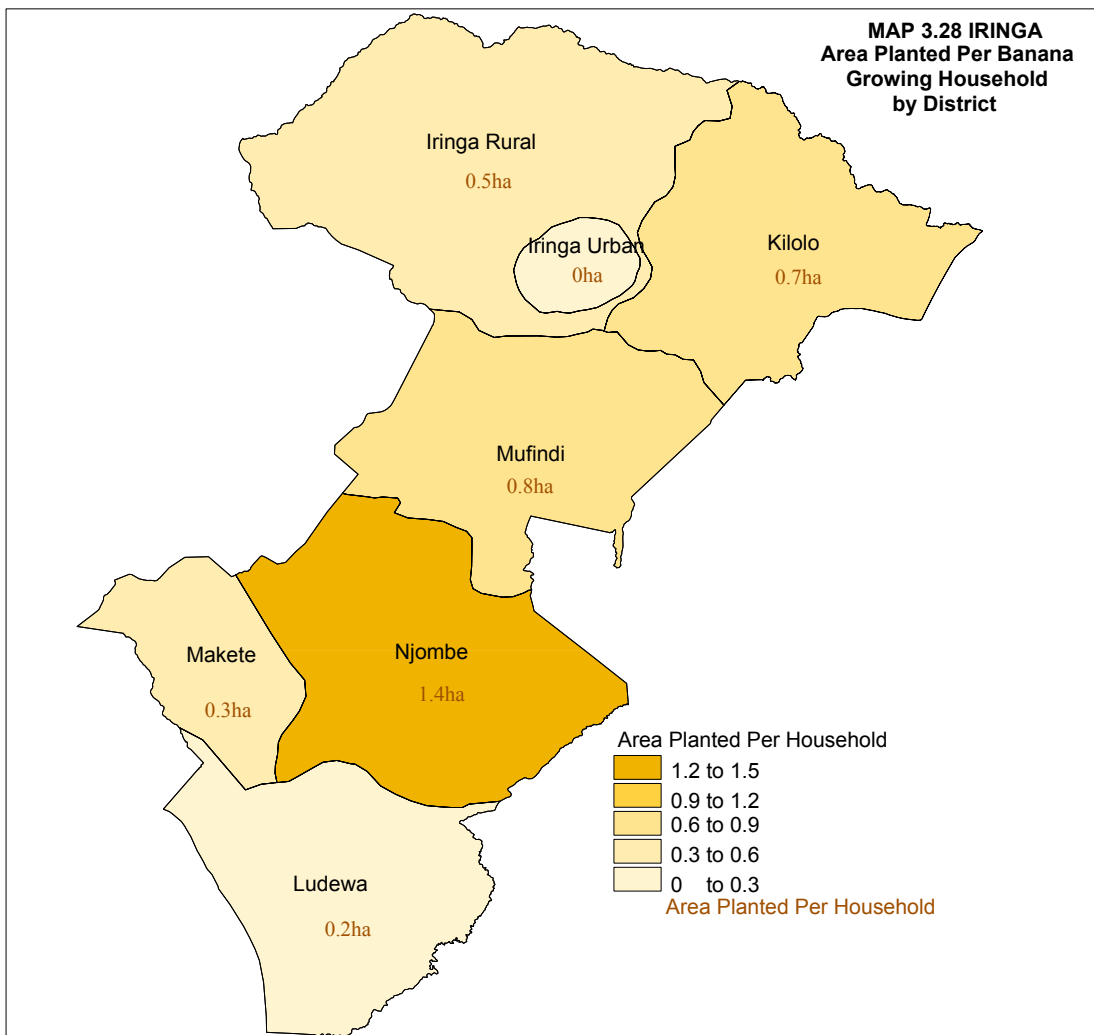
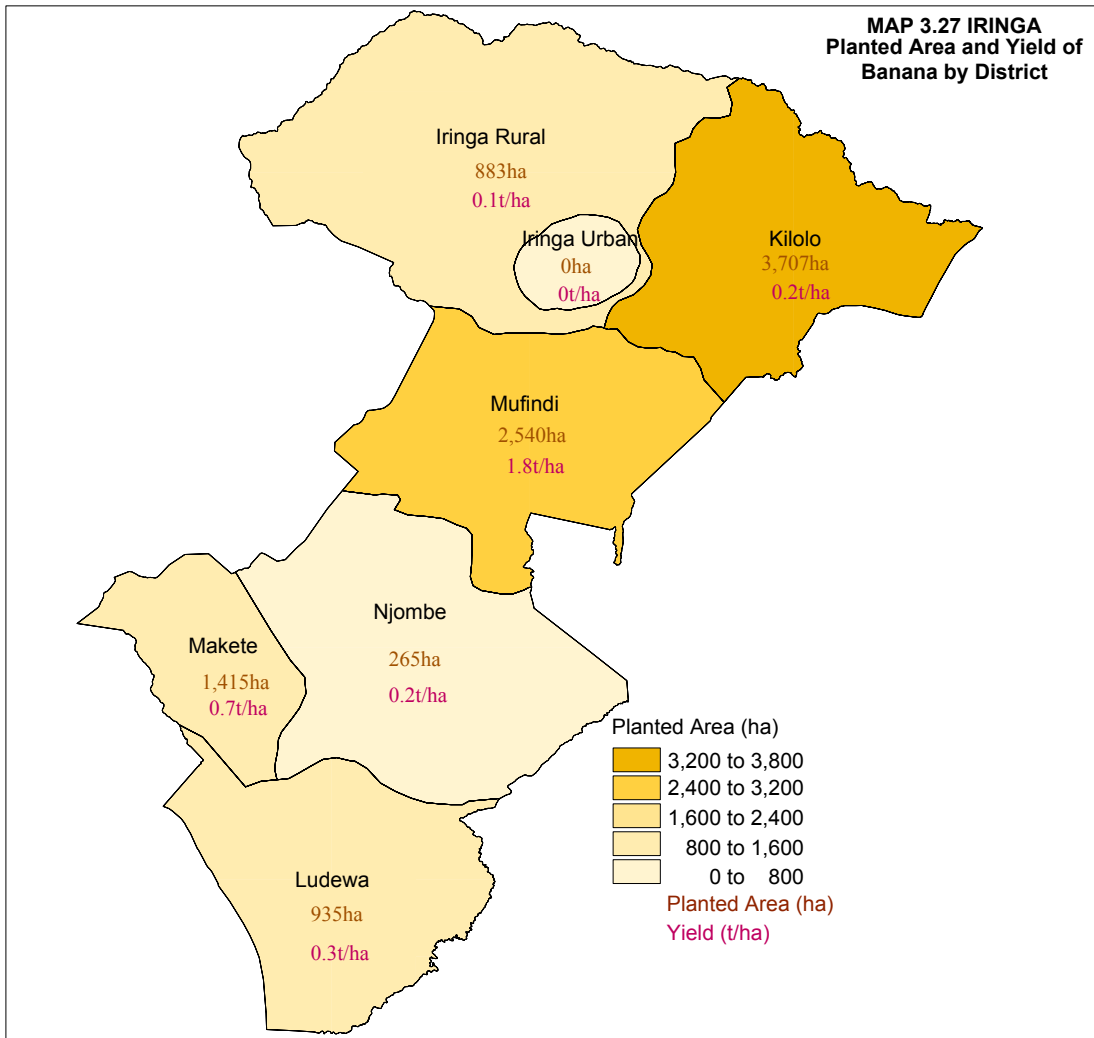
3.4.2 Mangoes

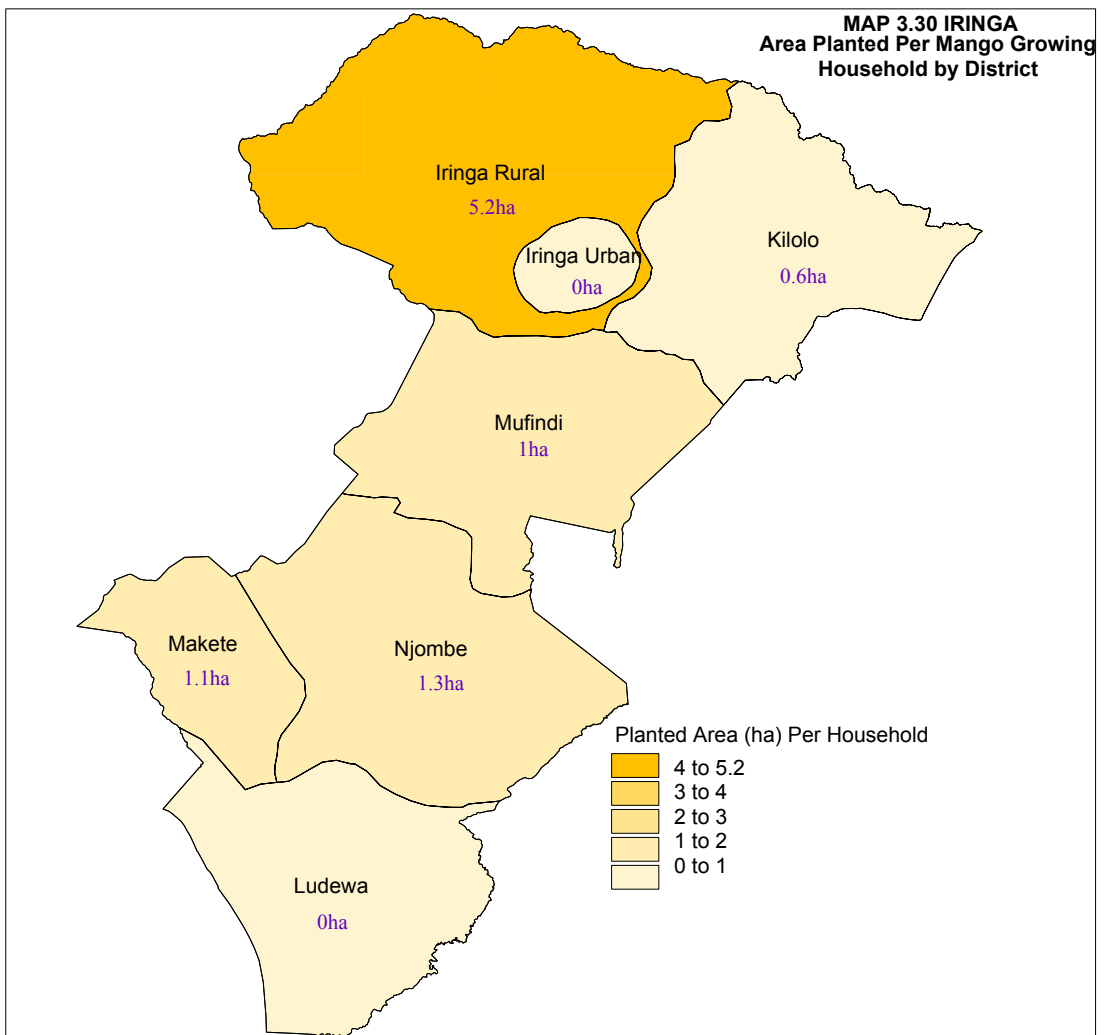
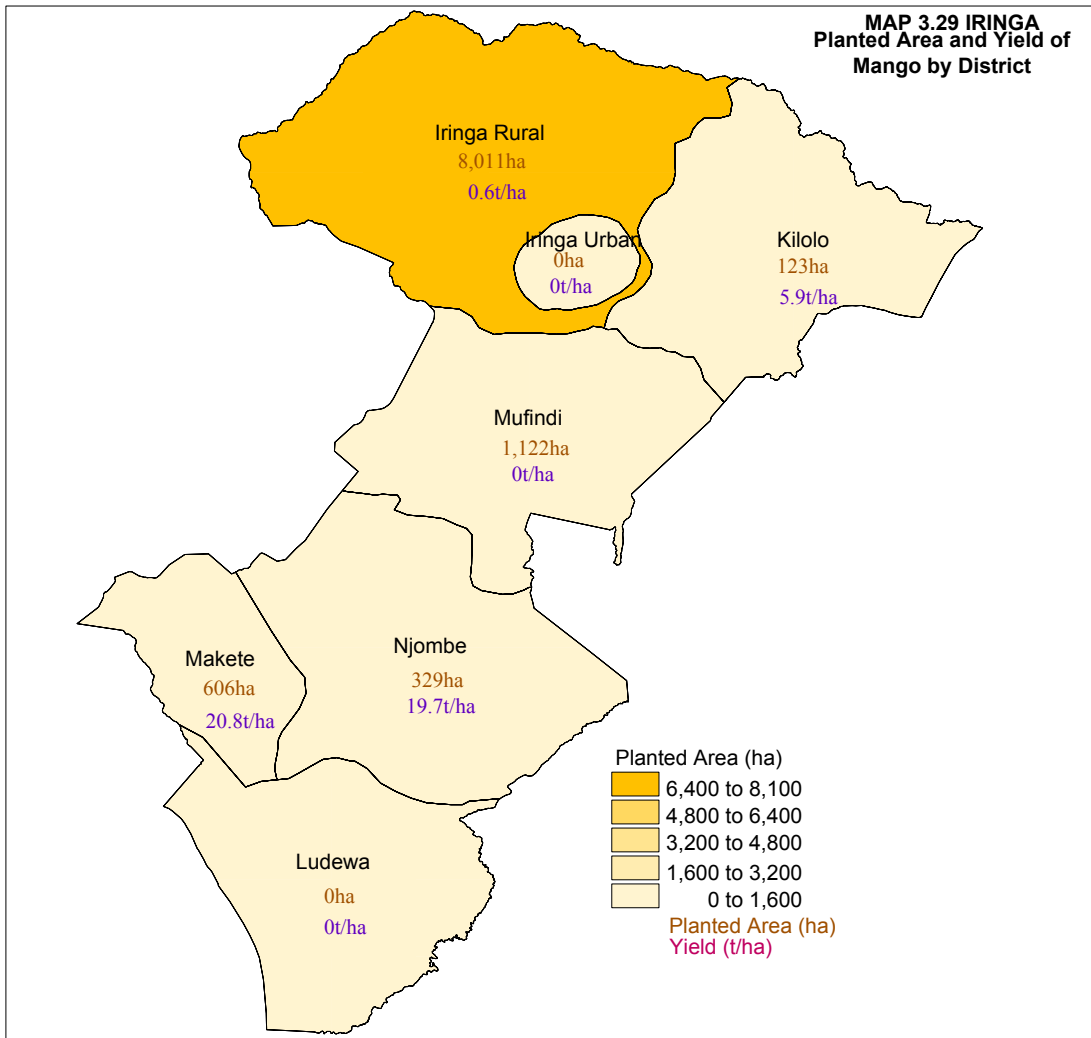
The total production of mangoes by smallholders was 1,873 tonnes. In terms of area planted, mangoes were the second most important permanent crop grown by smallholders in the region. It was grown by 3,681 households (1.3% of the total crop growing households in the region). The average area planted with mangoes per mango growing household was moderate for the region (0.8 ha) and the average yield obtained by smallholders was 1,354 kg/ha from a harvest area of 1,383 hectares. Mufindi district had the largest area planted with mangoes in the region (1,122 ha, 38% of the total area with mangoes in the region), followed by Iringa Rural (801 ha, 27%), Makete (606 ha, 20%), Njombe (329 ha, 11%) and Kilolo (123 ha, 4%) (Map 3.29). No mango cultivation was reported in Ludewa and Iringa Urban districts.



Mufindi district had the largest area planted with mangoes in the region (1,122 ha, 38% of the total area with mangoes in the region), followed by Iringa Rural (801 ha, 27%), Makete (606 ha, 20%), Njombe (329 ha, 11%) and Kilolo (123 ha, 4%) (Map 3.29). No mango cultivation was reported in Ludewa and Iringa Urban districts.

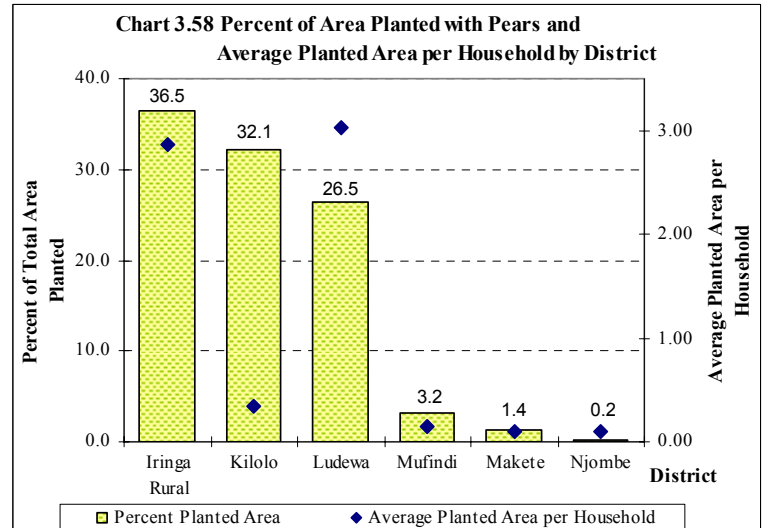
Moreover, the average area planted with mangoes per mangoes planting household was highest in Njombe (1.34 ha), followed by Makete (1.15 ha), Mufindi (0.97 ha), Kilolo (0.61%) and Iringa Rural (0.52 ha) (Chart 3.57 and Map 3.30).





3.4.3 Pears

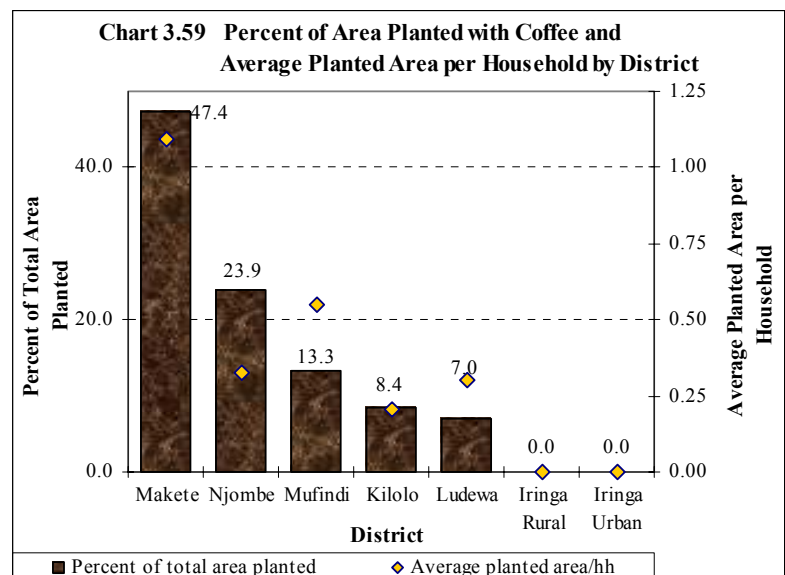
The total production of pears by smallholders was 6,199 tonnes from a harvested area of 651 ha. In terms of area planted, pears were the third most important permanent crop grown by smallholders in the region. It was grown by 4,348 households (1.6% of the total crop growing households). The average area planted with pears per pears growing household was relatively small (0.65 ha) and the average yield obtained by smallholders was 9,522 kg/ha. Iringa Rural district had the largest planted area of pears in the region (1,037 ha, 36.5% of the total area planted with pears in the region), followed by Kilolo (913 ha, 32%), Ludewa (752 ha, 26.5%), Mufindi (91 ha, 3.2%), Makete (39 ha, 1.4%) and Njombe (6 ha, 0.2%) (Map 3.31). However, the area planted with pears per pear growing household was highest in Ludewa (3.03 ha), followed by Iringa Rural (2.87 ha), Kilolo (0.34 ha), Mufindi (0.15 ha), Njombe and Makete districts share (0.1% each) (Chart 3.58 and Map 3.32).

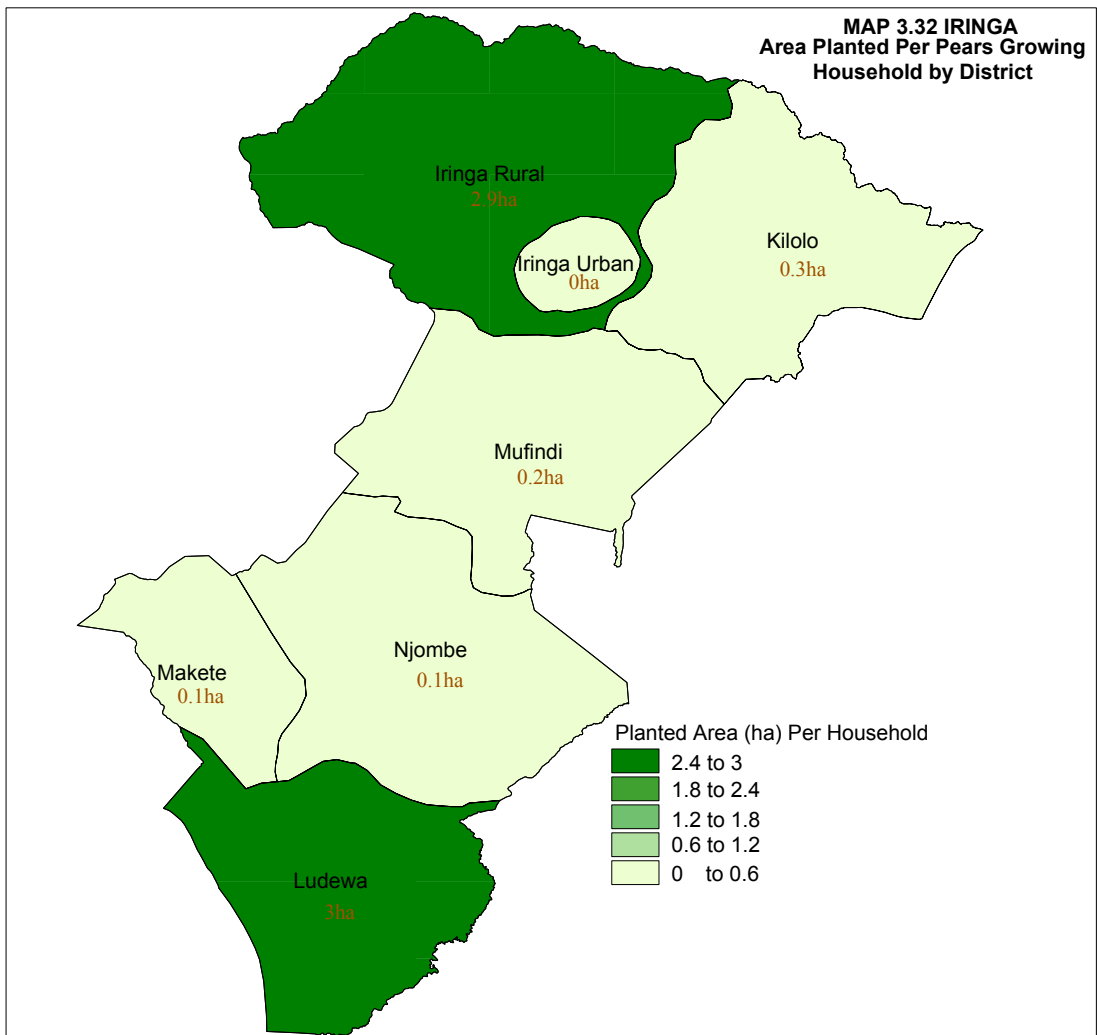
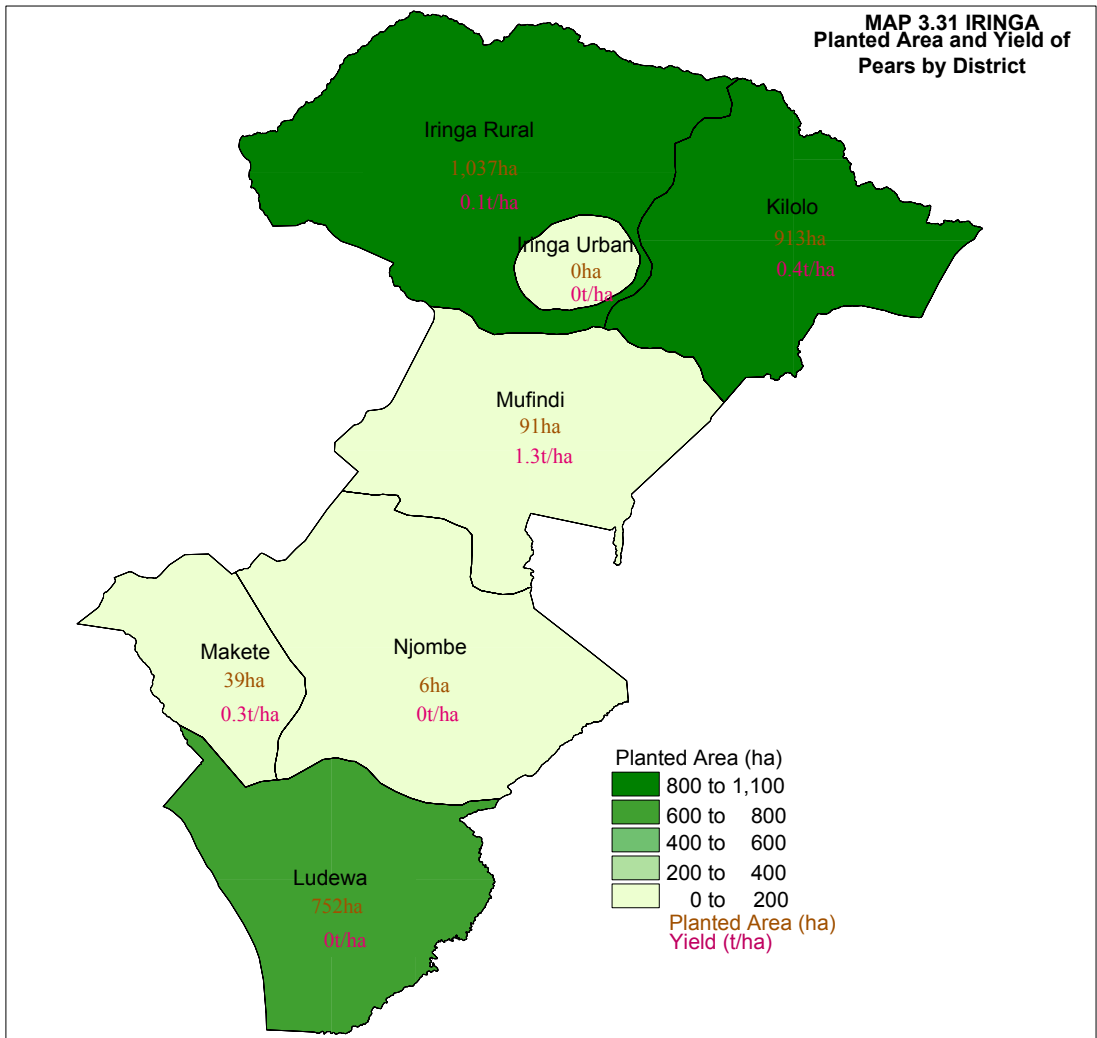


3.4.4 Coffee

The total production of coffee by smallholders was 803 tonnes from a harvested area of 1,020 ha. In terms of area planted, coffee was the fourth most important permanent crop grown by smallholders in the region. It was grown by 4,384 households (1.6% of the total crop growing households in the region). The average area planted with coffee per household was relatively small at around 0.49 ha per coffee growing household and the average yield obtained by smallholders was 787 kg /ha.

Makete had the largest area of coffee in the region (1,016 ha, 47.4% of the total area planted with coffee in Iringa region), followed by Njombe (512 ha, 23.9%), Mufindi (284 ha, 13.3%), Kilolo (180 ha, 8.4%) and Ludewa (151 ha, 7%). The average area planted per coffee growing household was highest in Makete district (1.09 ha), followed by Mufindi (0.55 ha), Njombe (0.33 ha), Ludewa (0.30 ha) and Kilolo (0.21 ha). Iringa Rural and Iringa Urban districts reported no coffee production (Chart 3.59).





3.5 Inputs/Implements Use

3.5.1 Methods of Land Clearing

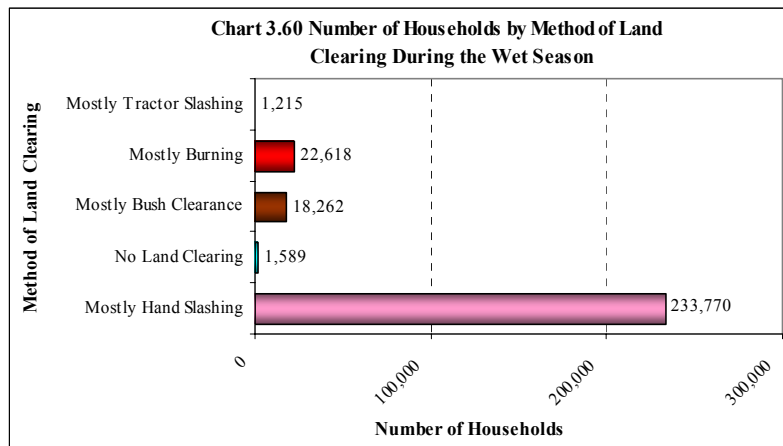
Land clearing is a common pre-tillage operation practiced by most farmers in the region. Land clearing is divided into two categories: bush clearing, which by definition implies either expansion into virgin areas or into areas which have been left fallow for a long period. The other category, which includes burning, hand slashing or tractor slashing, is normally an annual clearing exercise to remove vegetation growth from the previous season.

Hand slashing is the most widespread method used for land clearing. The area cleared by hand slashing in the region during the rainy season was 341,760 ha which represented 85.2 percent of the total planted area. Bush clearance, burning and tractor slashing are less important methods for land clearing and they represent 7.3, 6.6 and 0.5 percent respectively (Table 3.7 and Chart 3.60).

Table 3.7: Land Clearing Methods

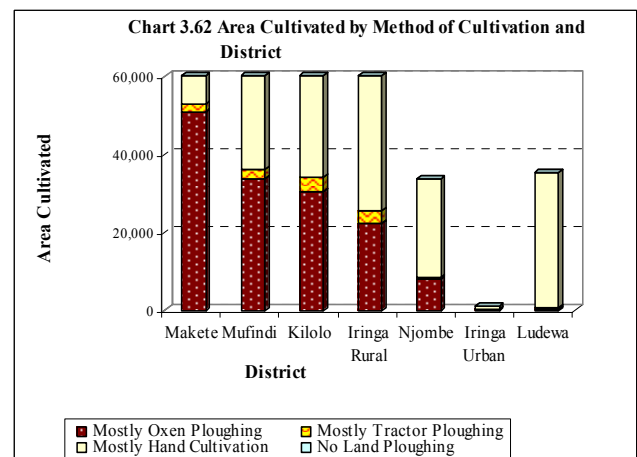
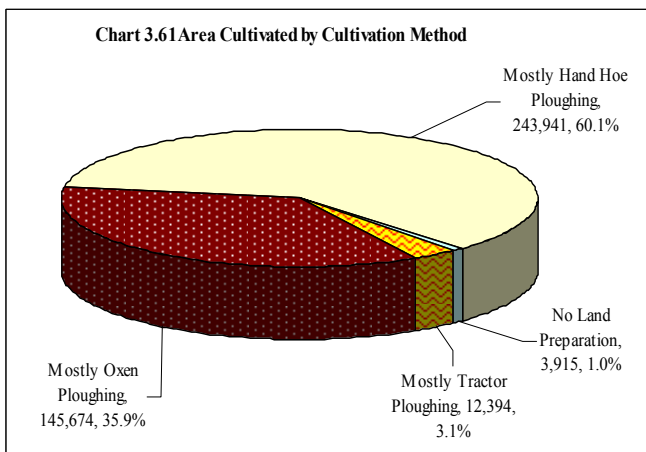
Method of Land Clearing	Number of Households	Planted Area(ha)	%
Mostly Hand Slashing	233,770	341,760	85.2
Mostly Bush Clearance	18,262	29,366	7.3
Mostly Burning	22,618	26,423	6.6
No Land Clearing	1,589	1,918	0.5
Mostly Tractor Slashing	1,215	1,831	0.5
Total	277,453	401,298	100

Note: This excludes land clearing for permanent cassava



3.5.2 Methods of Soil Preparation

Hand cultivation is the most common method of soil preparation and it was used on 243,941 ha, which represents 60.1 percent of the total planted area in Iringa region. This is followed by ox-ploughing (145,674 ha, 35.9%) and tractor ploughing (12,394 ha, 3.1%). No soil preparation was done on 3,915 ha of the planted area (1%) (Chart 3.61)

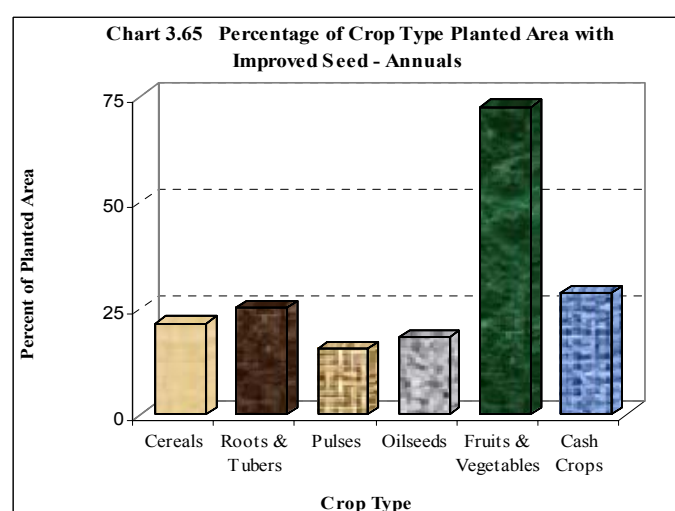
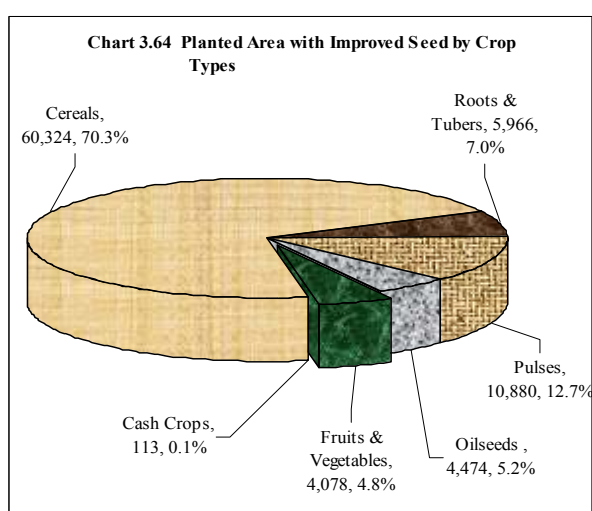
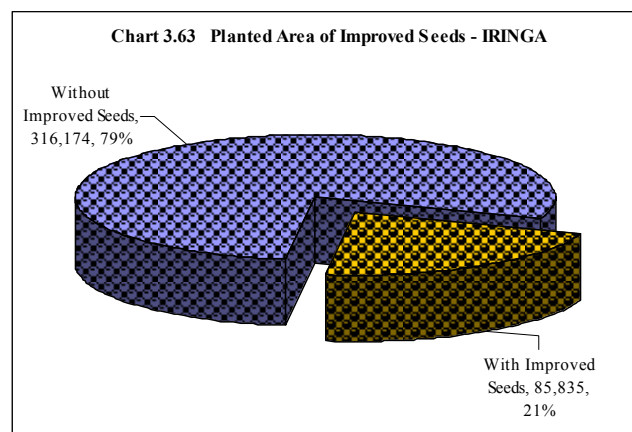


In Iringa region, Makete district has the largest planted area cultivated with oxen (50,618 ha, 34.7%) followed by Mufindi (33,786 ha, 23.2%), Kilolo (30,433 ha, 20.9%), Iringa Rural (22,347 ha, 15.3%), Njombe (8,109 ha, 5.6%), Iringa Urban (192 ha, 0.13%) and Ludewa (189 ha, 0.1 %) (Chart 3.62).

3.5.3 Improved Seeds Use

The planted area using improved seeds was 85,835 hectares which represents 21 percent of the total area planted with the annual crops and vegetables (Chart 3.63).

Cereals had the largest planted area with improved seeds (60,324 ha, 70.3% of the planted area with improved seeds) followed by pulses (10,880 ha, 12.7%), roots and tubers (5,966 ha, 7%), oil seed (4,474 ha, 5.2%), fruit and vegetables (4,078 ha, 4.8%) and cash crops (113 ha, 0.1%) (Chart 3.64). However, the use of improved seed in fruit and vegetables and is much greater than in other crop types (72.5 %) followed by cash crops (28.6%). Only 15.5 percent of the planted area with pulse crops used improved seed (Chart 3.65).



3.5.4 Fertiliser Use

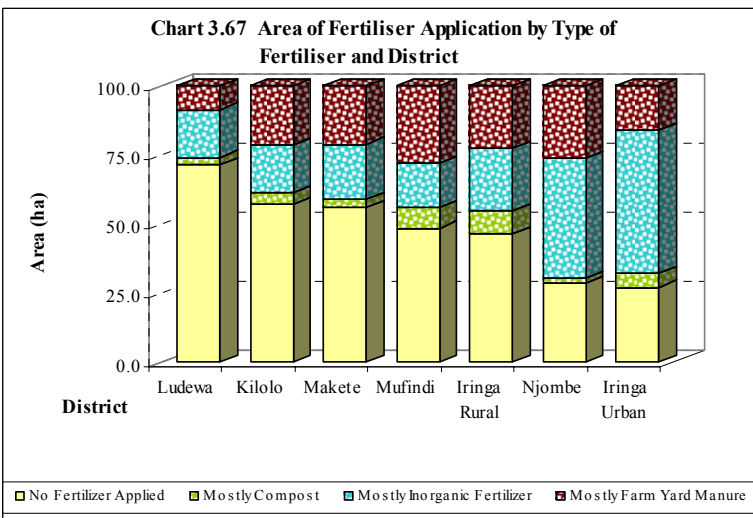
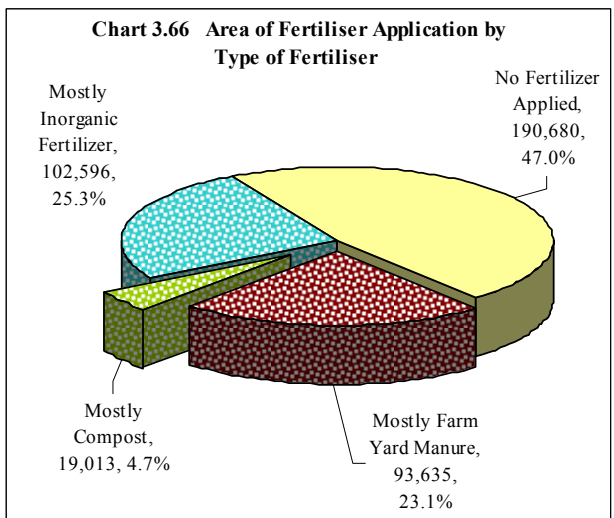
The use of fertilisers on annual crops in the region is relatively high compared to other regions with a planted area application of 15,244 hectares (53.0% of the total planted area in the region). The planted area without fertiliser for annual crops was 190,680 hectares representing 46.9 percent of the total planted area with annual crops (Table 3.8).

Table 3.8 Planted Area by Type of Fertiliser Use and District in Rainy Season

District	Fertilizer Use				No Fertilizer Applied	Total
	Mostly Farm Yard Manure	Mostly Compost	Mostly Inorganic Fertilizer	Total		
Iringa Rural	16,527	5,848	16,324	38,699	33,798	72,498
Mufindi	22,375	6,113	12,787	41,275	38,898	80,173
Njombe	28,738	1,826	47,267	77,831	31,040	108,870
Ludewa	3,235	976	6,360	10,571	26,547	37,118
Makete	7,442	1,011	7,118	15,571	19,707	35,279
Iringa Urb	178	54	575	807	302	1,109
Kilolo	15,139	3,186	12,164	30,489	40,389	70,878
Total	93,635	19,013	102,596	215,244	190,680	405,924

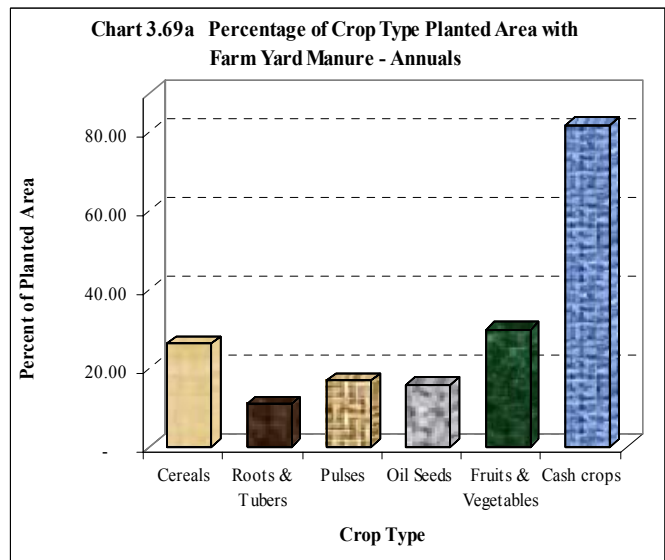
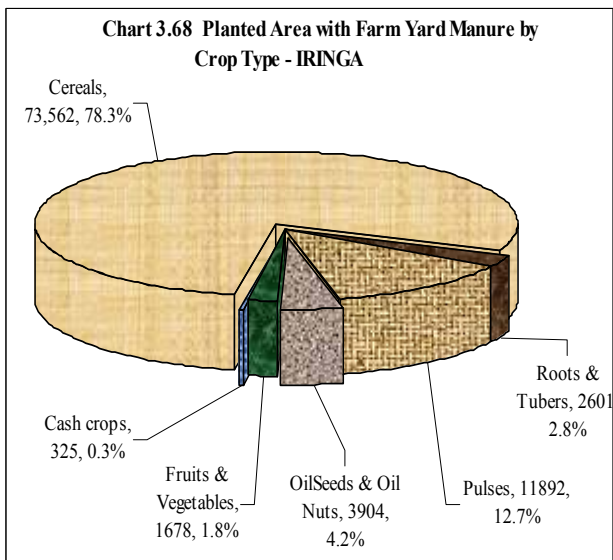
Of the planted area with fertiliser application, inorganic fertilizers was applied to 102,596 hectares which represents 25.3 percent of the total planted area and (47.7% of the area planted with fertiliser application in the region). This was followed by Farm Yard Manure (93,635 ha, 43.5%) and compost 19,013 hectares (8.8%) (Chart 3.66).

The highest percentage of area planted with fertiliser (all types) was in Iringa Urban (72.8%), followed by Njombe (71.5%), Iringa Rural (53.4%), Mufindi (44.1%), Kilolo (43%) and Ludewa (28.5%) (Chart 3.67 and Map 3.33).



3.5.4.1 Farm Yard Manure Use

The total planted area applied with farm yard manure in Iringa region was 93,635 hectares representing 43.5 percent of the total area planted with fertilisers in the region (Table 3.10). The number of households that applied farm yard manure on their annual crops during the wet season was 124,723. Cereals had the highest percent of the total planted area with farm yard manure (78.3%), followed by pulses (12.7%) and oil seeds (4.2%), however cash crops has the lowest percent (0.3%)(Chart 3.68).



The use of farm yard manure on cash crops is much greater than in other crop types (81.9 %), however this has to be treated with caution because of the small number of observations. This is followed by fruit and vegetables (29.8%) and cereals (26.2%). Only 10.9 percent of the planted area with roots and tuber crops has farm yard manure application (Chart 3.69a).

Farm yard manure is mostly used in Mufindi District (27.9% of the total planted area in the district), followed by Njombe (26.4%), Iringa Rural (22.8%), Makete (21.1%), Iringa Urban (16.1%) and Ludewa (8.7%) Chart 3.69b).

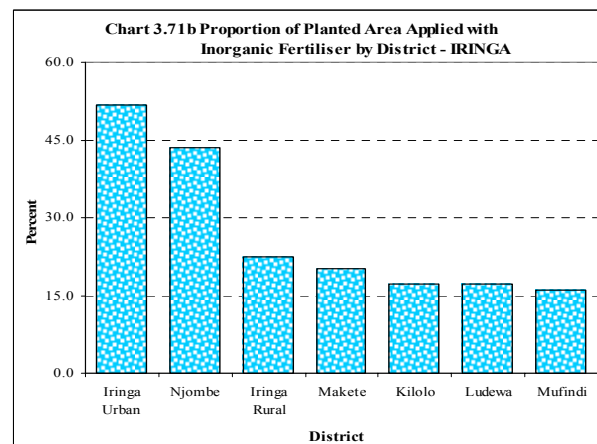
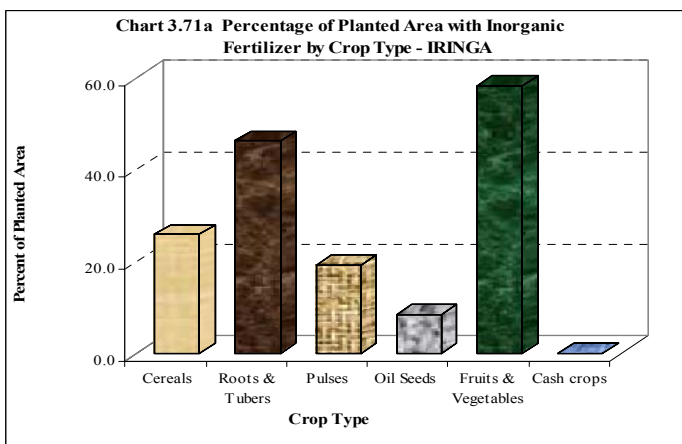
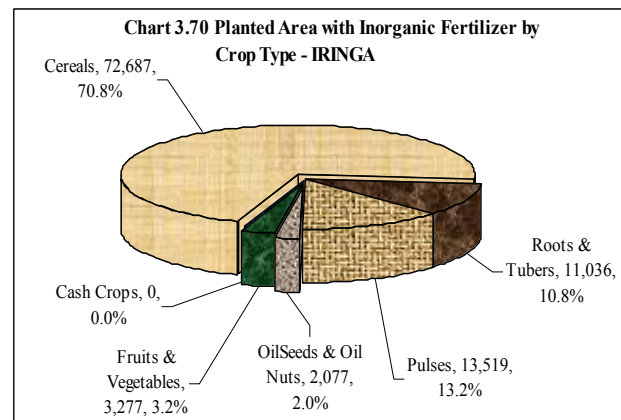
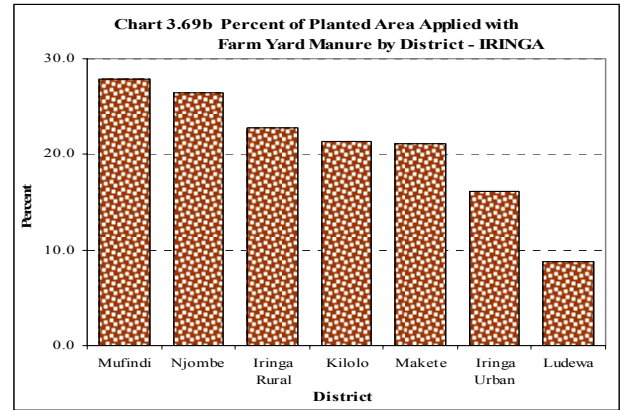
For permanent crops, most farm yard manure is used in the production of passion fruits (40.8%), followed by apples (31.8%) and coffee (25.7%).

3.5.4.2 Inorganic Fertilisers Use

The total planted area applied with inorganic fertilisers in Iringa region was 102,595 hectares which represents 25.3 percent of the total planted area with annuals in the region and 47.7 percent of the total planted area with fertilisers (Chart 3.70). The number of households that applied inorganic fertilizers on their annual crops during the rainy season was 160,417 (Table 3.10).

The largest area applied with inorganic fertilizers was in cereals (72,687 ha, 70.8% of the total area applied with inorganic fertilizers), followed by pulses (13,519 ha, 13.2%), roots and tubers (11,036 ha, 10.8%), fruit and vegetables (3,277 ha, 3.2%) and oil seeds (2,077 ha, 2.0%). No inorganic fertiliser was applied to cash crops (Chart 3.70).

The use of inorganic fertiliser on fruit and vegetables is much greater than in other crop types (58.3 %), followed by roots



and tubers (46.3%), cereals (25.9%), pulses (19.2%) and oil seed crops (8.4%) (Chart 3.71a).

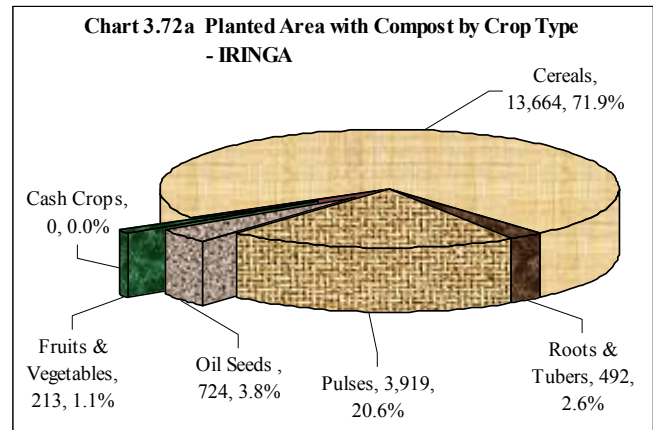
The proportion of inorganic fertiliser used on cereal crops was 12.7 percent higher than other crop types, followed by roots and tubers (1.1%), pulses (0.8%) and cereals (0.3%) (Chart 3.71a).

Inorganic fertiliser is mostly used in Iringa Urban (51.8% of the total planted area in the district), followed by Njombe (43.4%), Iringa Rural (22.5%), Makete (20.2%), Kilolo (17.2%), Ludewa (17.1%) and Mufindi (15.9%) (Chart 3.71b).

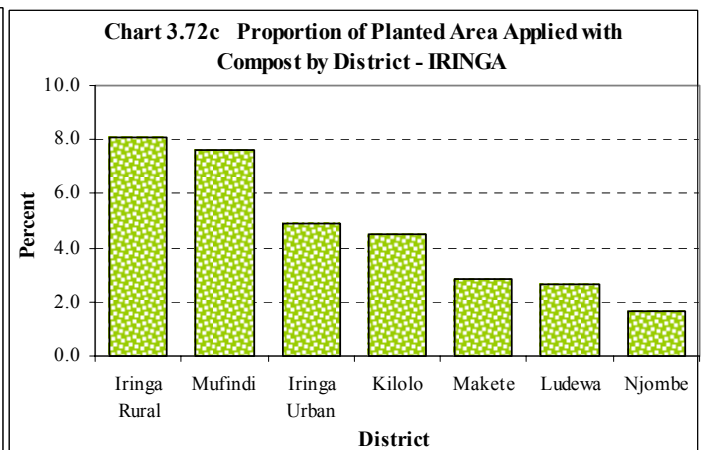
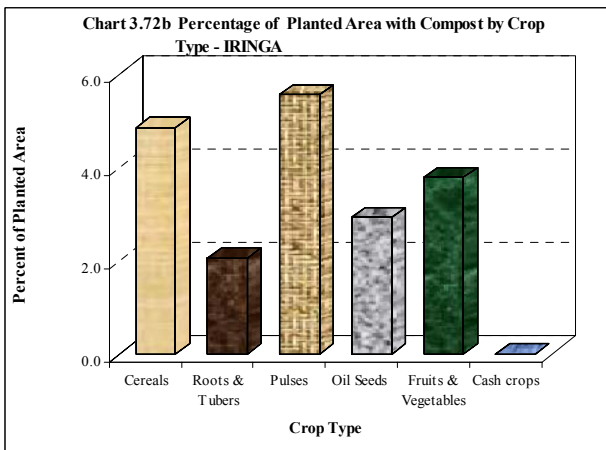
3.5.4.3 Compost Use

The total planted area applied with compost was 19,014 hectares which represents only 4.7 percent of the total planted area with annual crops in the region and 8.8 percent of the total planted area with fertilisers in the region. The number of households that applied compost manure on their annual crops during the wet season was 31,807.

The results show that 72 percent of the area applied with compost was planted with cereals, followed by pulses (21%), oil seeds (4%), roots & tubers (3%) and fruit and vegetables (1%). Cash crops were not applied with compost manure (Chart 3.72a).



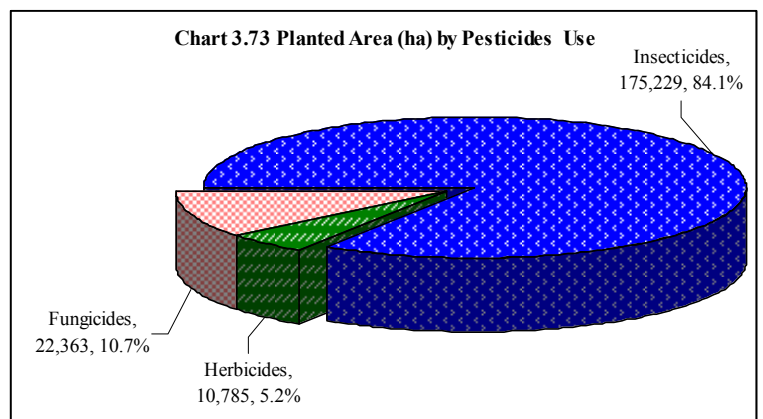
Though the proportion of compost manure applied on each crop type was very low (0 to 5%), pulse and cereal crops had the highest proportions (5.6% and 4.9% respectively) followed by fruit and vegetables (3.8) (Chart 3.72b).



Compost was mostly used in Iringa Rural (8.1% of the total planted area in the district), followed closely by Mufindi (7.6%), then Iringa Urban (4.9%), Kilolo (4.5%), Makete (2.9%), Ludewa (2.6%) and Njombe (1.7%) (Chart 3.72c).

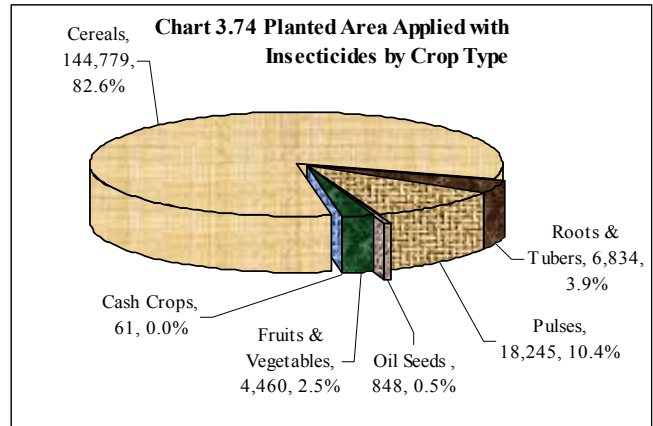
3.5.5 Pesticide Use

Pesticides are chemicals used for controlling insects, diseases and weeds. This section analyses the use of these chemicals by smallholders on both annual and permanent crops in the region. Pesticides were applied to a planted area of 208,377 hectares of annual crops and vegetables. Insecticides are the most common pesticides used in the region (84.1% of the total area applied with pesticides), followed by fungicides (10.7%) and herbicides (5.2%) (Chart 3.73).

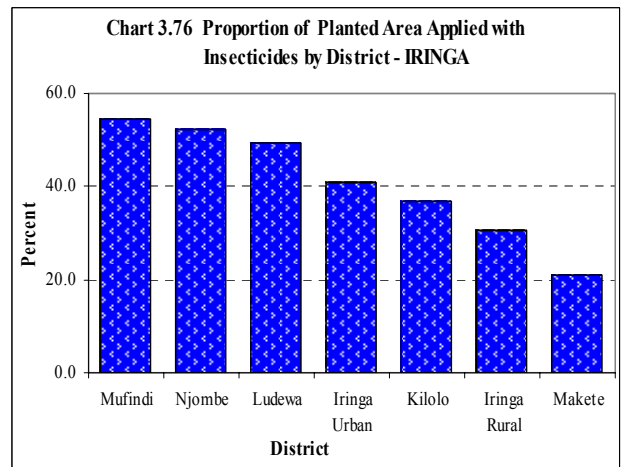
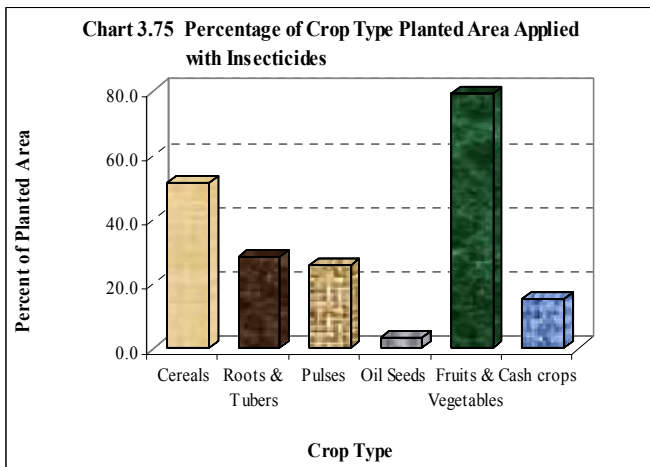


3.5.5.1 Insecticide Use

The planted area applied with insecticides was estimated at 175,229 ha which represented 43.2 percent of the total planted area for annual crops. Cereals had the largest planted area applied with insecticides (144,779 ha, 82.6% of the total planted area with insecticides), followed by pulses (18,245 ha, 10.4%), roots and tubers (6,834 ha, 3.9%), fruit and vegetables (4,460 ha, 2.5%), oil seed (848 ha, 0.5%) and cash crops (61 ha, 0.04%) (Chart 3.74).



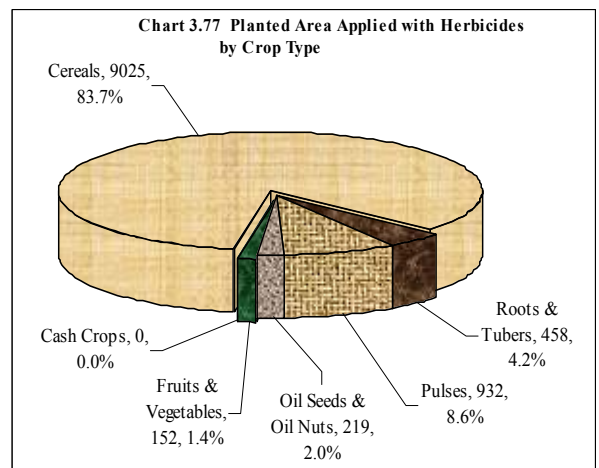
The use of insecticides on fruit and vegetables is much greater than in other crop types (79.3%), followed by cereals (51.6%), roots and tubers (28.7%), pulses (25.9%), cash crops (15.5%) and oil seed crops (3.4%) (Chart 3.75).



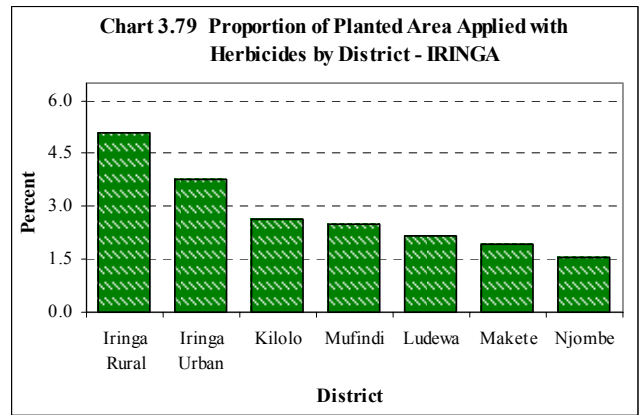
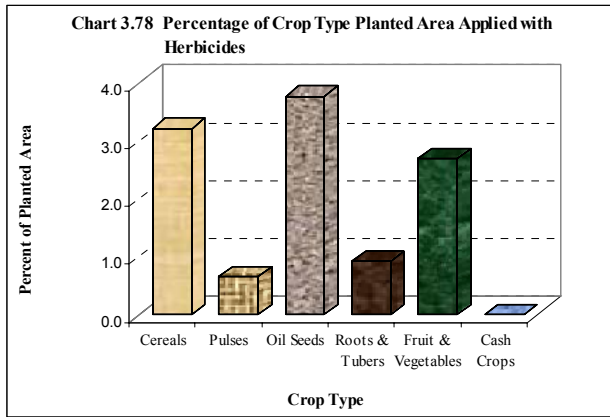
Mufindi district had the highest percent of planted area with insecticides (43,799 ha, 54.6% of the total planted area with annual crops in the district). This was closely followed by Njombe (57,061 ha, 52.4%) then Ludewa (18,364 ha, 49.5%), Iringa Urban (453 ha, 40.8%), Kilolo (25,998 ha, 36.7%), Iringa Rural (22,171 ha, 30.6%) and Makete (7,384 ha, 20.9%) (Chart 3.76).

3.5.5.2 Herbicide Use

The planted area applied with herbicides was 10,785 hectares which represented 2.7 percent of the total planted area annual crops and vegetables. Cereals had the largest planted area applied with herbicides (9,025 ha, 83.7%), followed by pulses (932 ha, 8.6%), roots and tuber (458 ha, 4.2%), oil seed (219 ha, 2.0%), fruits and vegetables 152 ha, 1.4%). Herbicide was not applied to cash crops (Chart 3.77).



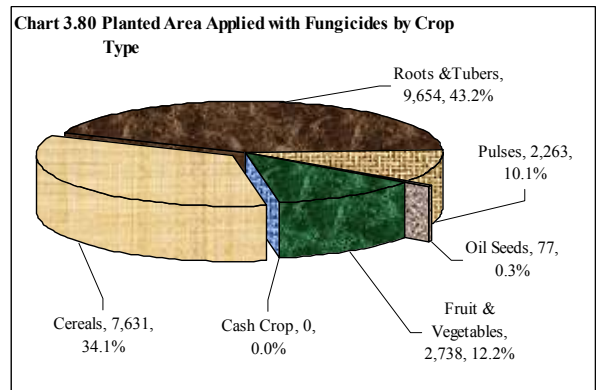
Though the proportion of herbicides applied on each crop type was very low (0 to 5%), oil seeds has a relatively a larger area applied than on other crop types (3.8%), followed by cereals (3.2%), fruit and vegetables (2.7%), roots and tubers (0.9%) and pulses (0.6%) (Chart 3.78).



Iringa Rural district had the highest percent of planted area with herbicides (5.1% of the total planted area with annual crops in the district). This is followed by Iringa Urban (3.8%) then Kilolo (2.6%), Mufindi (2.5%), Ludewa (2.1%), Makete (1.9%) and Njombe (1.6%) (Chart 3.79).

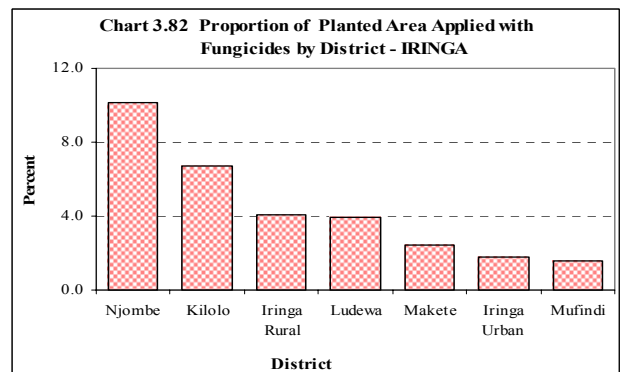
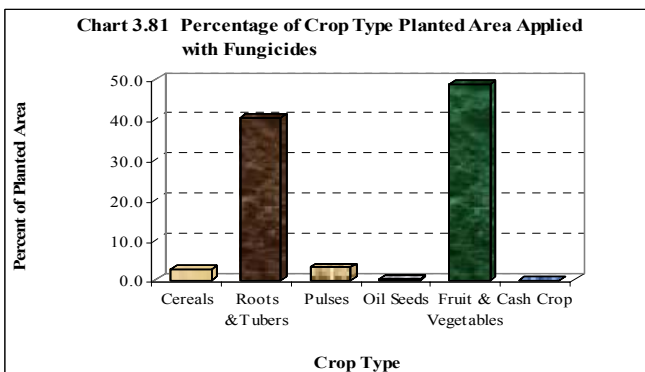
3.5.5.3 Fungicide Use

The planted area applied with fungicides was (22,363 ha) which represented 4.4 percent of the total planted area for annual crops). Root and tubers had the largest planted area applied with fungicides (9,654 ha, 42.2%) followed by cereals (7,631 ha, 34.1%), fruits and vegetables (2,733 ha, 12.2%), pulses (2,263 ha, 10.1%) and oil seeds (77 ha, 0.3%). No herbicides were applied to cash crops (Chart 3.80).



However, the percentage use of fungicide in fruit and vegetables, roots and tubers and pulses was much greater than in other crop types (0.49%, 0.410% and 0.32% respectively) and very little was applied on cereal crops 0.03 and oil seeds (0.003%) (Chart 3.77).

Njombe district had the highest percent of planted area with herbicides (10.1% of the total planted area with annual crops in the district). This is followed by Kilolo (6.7%), Iringa Rural (4.1%), Ludewa (3.9%) and Makete (2.4%). The smallest percentage use was recorded in Mufindi district (1.6%) (Chart 3.82).



3.5.6 Harvesting Methods

The main harvesting method for cereals was by hand. Very small amount of maize was harvested by machine (0.2%) All other cereals and annual crops were harvested by hand.

3.5.7 Threshing Methods

Hand threshing was the most common method used, with 89 percent of the total area planted with cereals during the long rainy season being threshed by hand. Draft animals, human powered tools and engine driven machines were only used on crops harvested from 0.1 percent, 0.1 percent and 0.2 percent of the total planted area respectively.

3.6 Irrigation

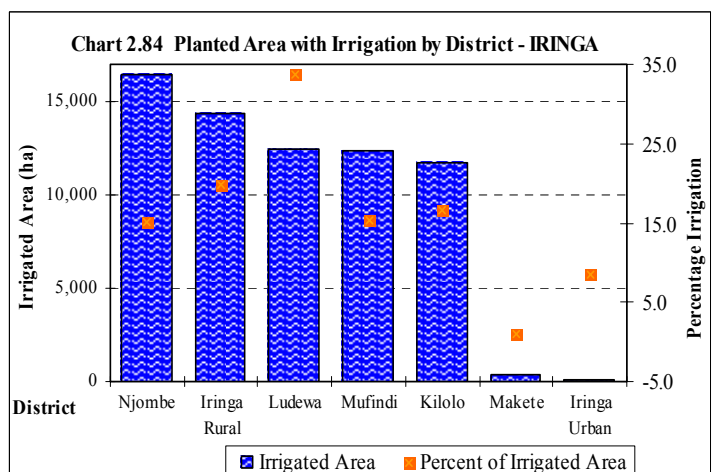
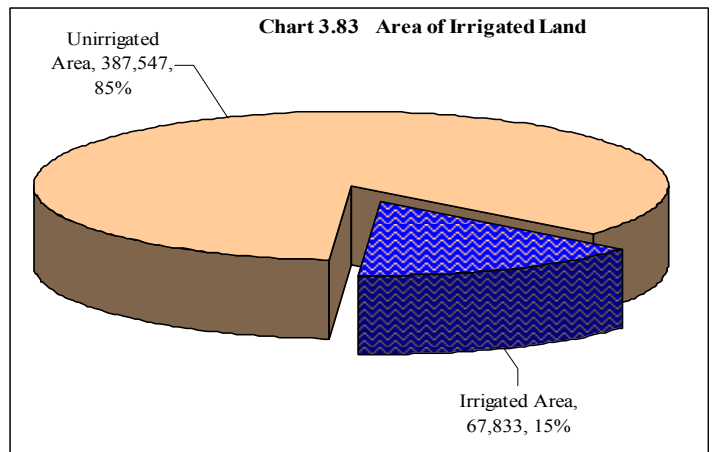
Water is the limiting factor to crop production in the majority of areas in Tanzania and without water most other agricultural practices applied to crops do not result in significant increases in yields. This section deals with the area under irrigation by different crops and the means by which water was extracted from the source and applied to the field.

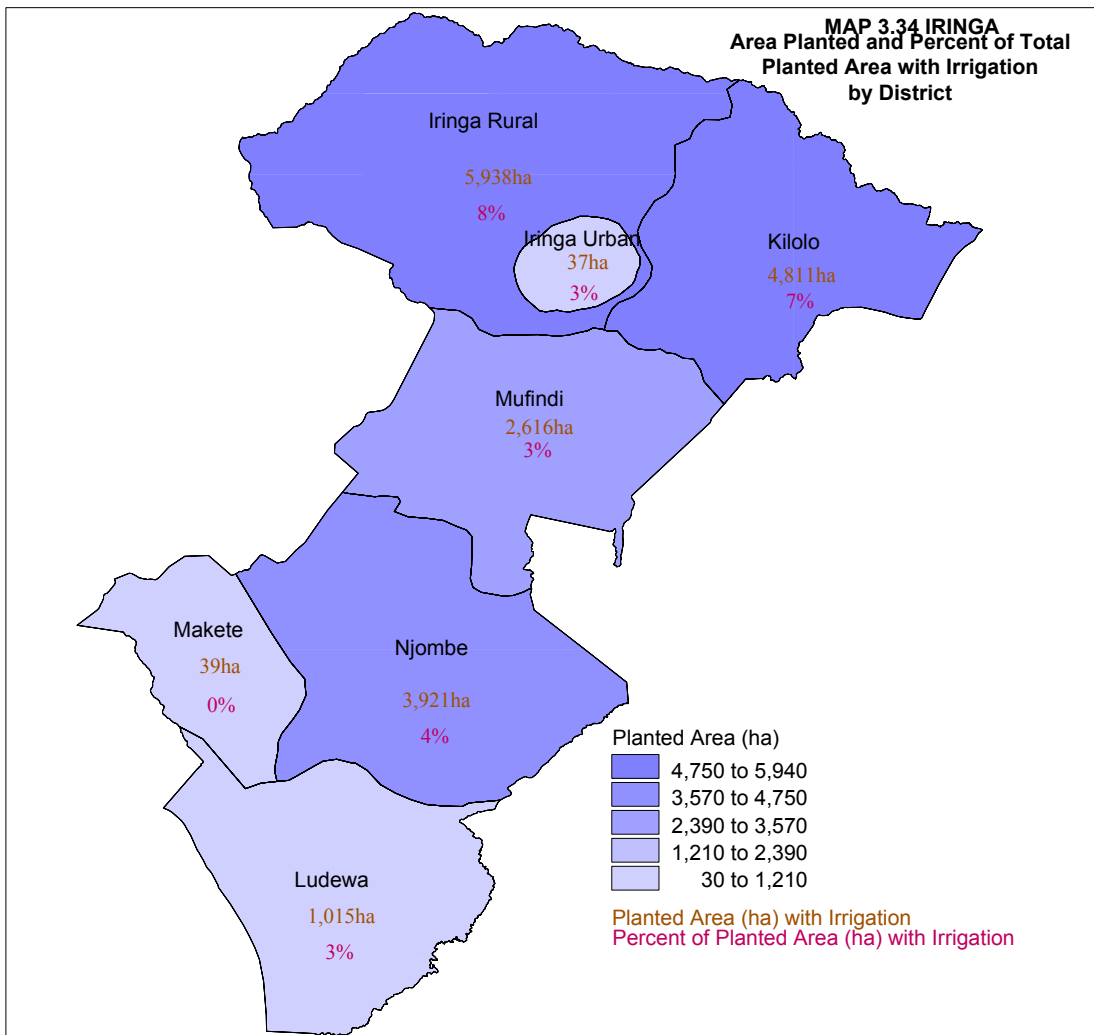
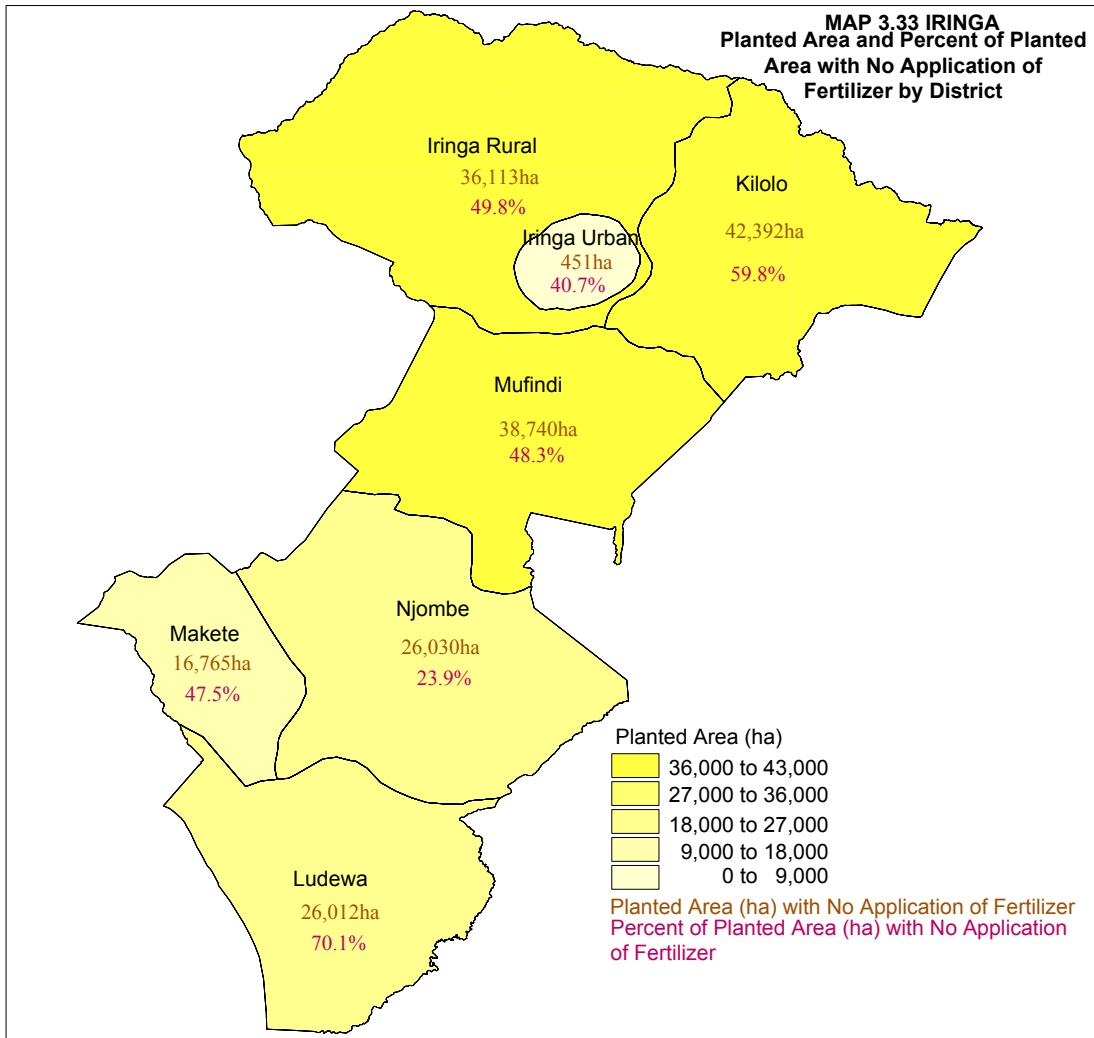
3.6.1 Area Planted with Annual Crops and Under Irrigation

In Iringa region, the area of annual crops under irrigation was 67,833 hectares representing 16.7 percent of the total area planted area in the region (Chart 3.84).

The district with the largest planted area under irrigation with annual crops was Njombe with 16,423 ha (24.2% of the total planted area with irrigation in the region). This is followed by Iringa Rural with (14,369 ha, 21.2%), Ludewa (12,498 ha, 18.4%), Mufindi (12,344 ha, 18.2%), Kilolo (11,767 ha, 17.3%), Makete (337 ha, 0.5%) and Iringa Urban (95 ha, 0.1%).

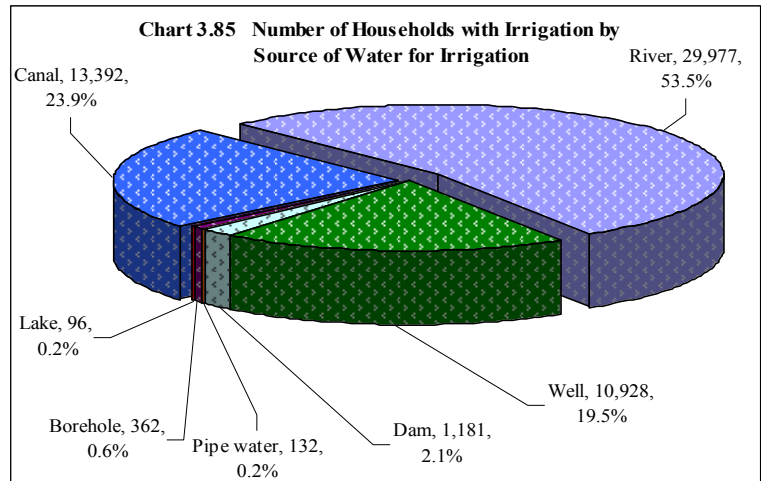
When expressed as a percentage of the total area planted in each district, Ludewa had the highest percentage (33.7% of the planted area under irrigation in the district). This is followed by Iringa Rural (19.8%), Kilolo (16.6%), Mufindi (15.4%), Njombe (15.1%), Iringa Urban (8.6%), and Makete (1.0%) (Chart 3.84 and Map 3.34).





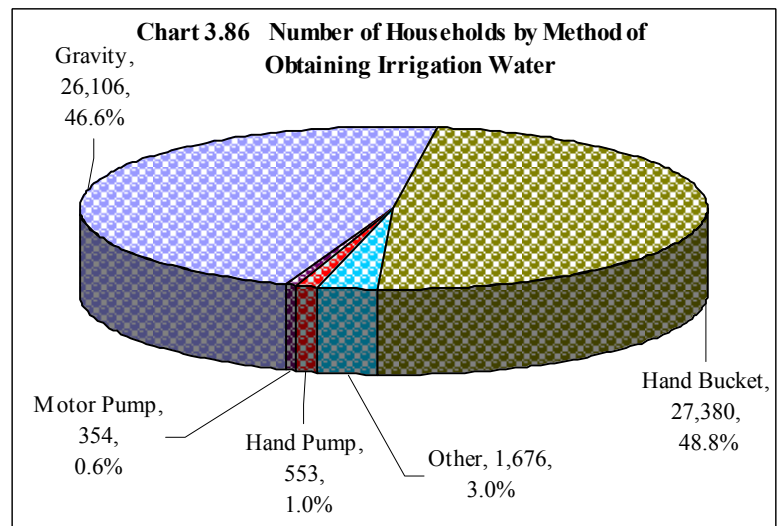
3.6.2 Sources of Water Used for Irrigation

The main source of water used for irrigation was from rivers (53.5% of all households with irrigation). This was followed by canals (24%) and wells (19.5%). Only 2 percent of the households used water from dams, and 0.6 percent used water from boreholes. The proportion of households that used piped water and lakes as sources of water for irrigation was very small (0.24% and 0.17% respectively) (Chart 3.85).



3.6.3 Methods of Obtaining Water for Irrigation

Hand bucket was the most common means of getting water for irrigation with 48.8 percent of the total households using this method in the region. This was closely followed by gravity with (46.6%), other (3.0%), hand pump (1.0%) and motor pump (0.6%) (Chart 3.86).

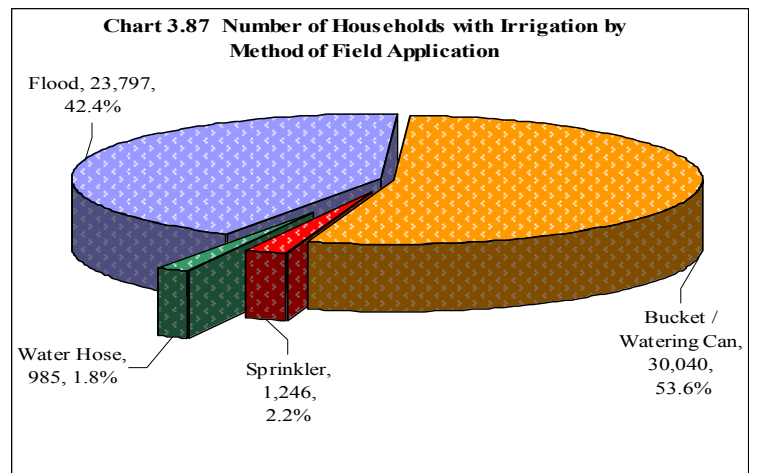


Hand bucket was used by most households to obtain water for irrigation. Ludewa district had 66.3 percent of households in the district using hand buckets for obtaining irrigation water, followed by Makete (65.6%), Iringa Urban (49.0%), Mufindi (47.7%) and Iringa Rural (43.0%). Gravity was more common in Kilolo with 55.9 percent of households in the district using this method to get water for irrigation, followed by Mufindi (52.3%), Njombe (51.8%), Iringa Rural (51.4%), Iringa Urban (33.7%) and Makete (32.9%).

Although hand bucket and gravity were the most common methods of obtaining irrigation water in all seven districts, some of the households in Kilolo, Iringa Rural and Makete districts used hand and motor pumps as well.

3.6.4 Methods of Water Application

Most households used buckets/watering cans for applying irrigation water (53.6% of the total households using irrigation in the region), followed closely by flood (42.4%), then sprinklers (2.2%) and water hoses (1.8%) (Chart 3.87).



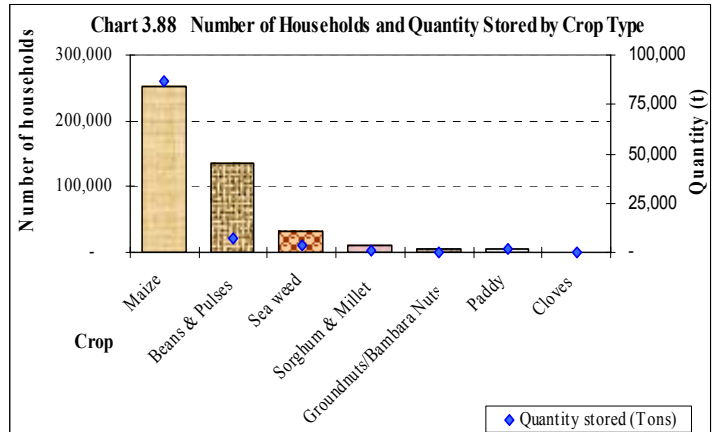
3.7 Crop Storage, Processing and Marketing

3.7.1 Crop Storage

Crop storage means keeping a crop for a certain period of time as food for the household, to sell at higher prices or as seed for planting in the following season.

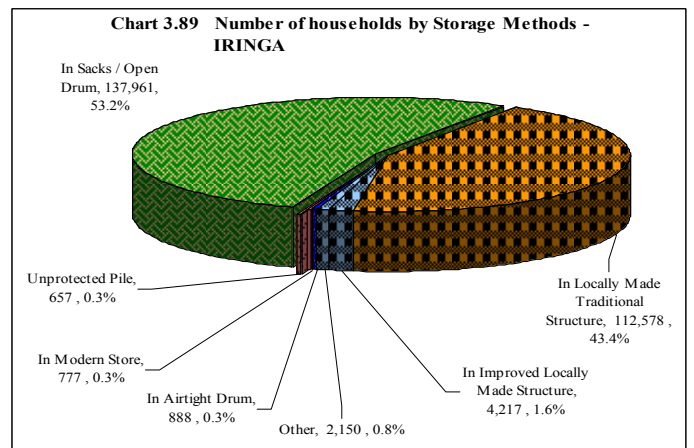
The results for Iringa region show that there were 259,527 crop growing households that stored various agricultural products in the region (93% of the total crop growing households).

The most important stored crop was maize with 251,696 households storing 86,901 tonnes on 1st January 2004. This was followed by beans and other pulses (136,641 households, 7,310 tonnes), paddy (5,218 households, 1,594 tonnes) and groundnuts and bambara nuts (6,381 households, 3,104 tonnes). Other crops were stored in very small quantities (Chart 3.88).



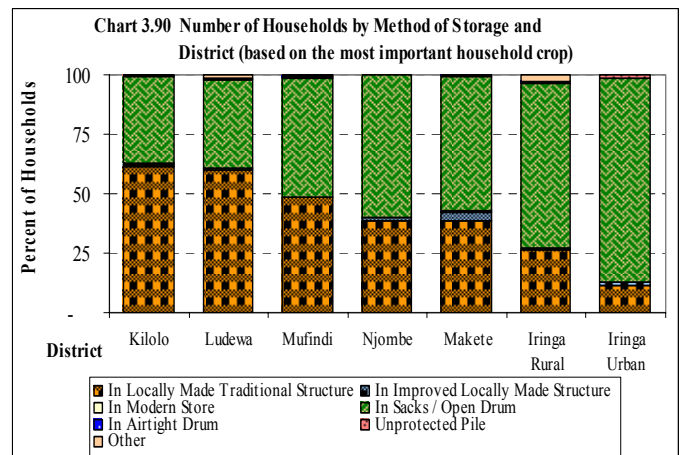
3.7.1.1 Methods of Storage

The region had 137,961 crop growing households storing their produce in sacks and/or open drums (53% of households that stored crops in the region). The number of households that stored their produce in locally made traditional structures was 112,578 (43%). This was followed by: improved locally made structures (4,217 households, 2%), other structures (2,150 households, 0.8%), air tight drums (888 households, 0.34%), modern stores (777 households, 0.3%) and in unprotected piles (657 households, 0.25%) (Chart 3.89).



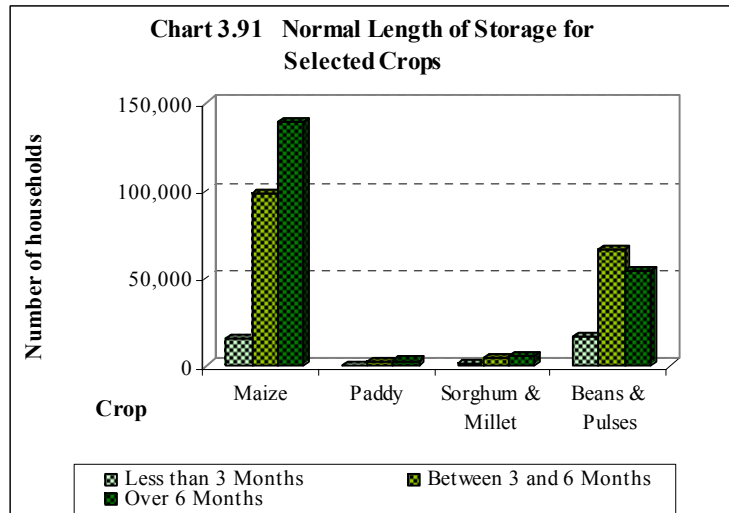
Sacks and open drums were the dominant storage methods in all districts, with Iringa Urban having the highest percent of households using the method (86% of the total number of households storing crop products in the district). This is followed by Iringa Rural (69%), Njombe (60%), Makete (56%), Mufindi (50%), Ludewa and Kilolo (37%).

The highest percent of households using Locally Made Traditional Structures was in Kilolo (61% of the total number of households storing crops in the district), followed by Ludewa (60%), Mufindi (48%), Njombe (39%), Makete (39%), Iringa Rural (26%) and Iringa Urban (11%) (Chart 3.90).

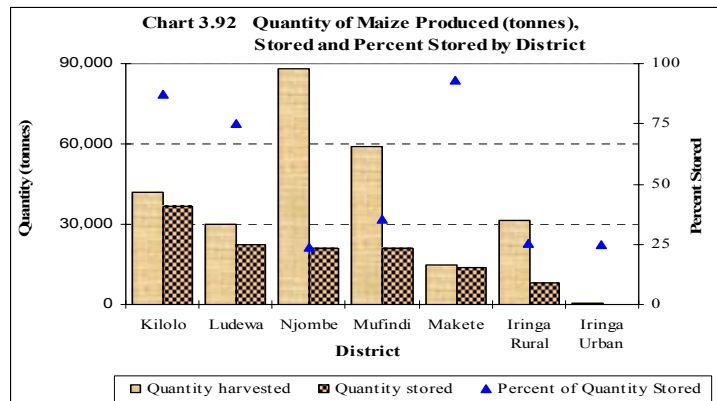


3.7.1.2 Duration of Storage

For the selected crops, most households stored their produce for a period of over 6 months, followed by those who stored for a period 3 to 6 months. The minority of households stored their crops for less than three months. The proportion of households that stored their produce for a duration of over 6 months was highest in Njombe (66% of the households that stored crops), followed by Makete district (64%), Ludewa (58.3%), Iringa Urban (53.7%), Mufindi (50.8 %), Kilolo (50%), Iringa Rural (41.4%) (Chart 3.91 and Map 3.35).

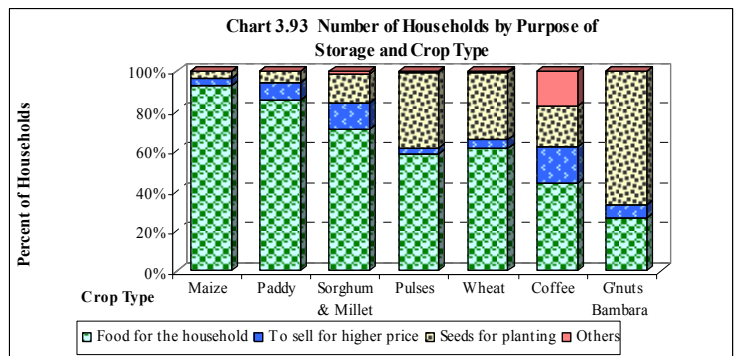


District comparison of duration of storage cannot be done for all crops combined. However, the analysis has been done for maize only as it is the most commonly stored crop. Kilolo, Ludewa and Makete districts had a comparatively higher percent of their crop stored on 1 October 2003. However, households in Njombe, Mufindi and Iringa Rural districts stored relatively little maize in comparison to the quantity produced, indicating that the quantity stored was determined by the food and seed requirements of the households and not to sell during the “off-season” when the farm gate price of maize is higher (Chart 3.92).



3.7.1.3 Purposes of Storage

Subsistence food crops (maize, paddy, sorghum and millet, beans and pulses) are mainly stored for household consumption. The percent of households that stored maize for household consumption as the main purpose of storage was 93 percent, followed by seed for planting. Virtually, almost all stored annual cash crops were stored for selling at higher price (Chart 3.93).



3.7.1.4 The Magnitude of Storage Loss

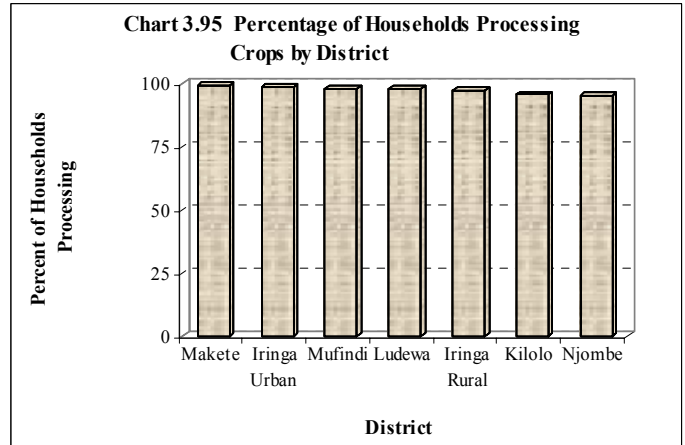
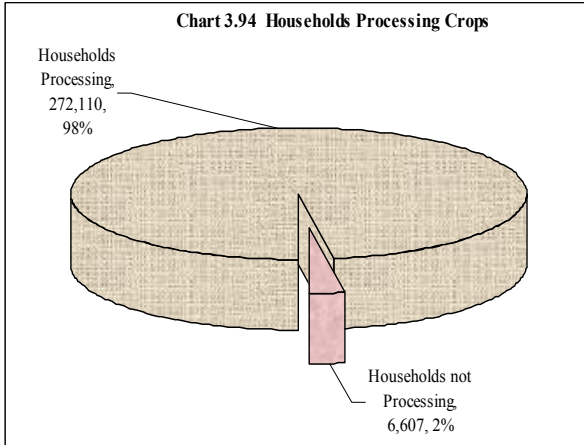
About 80 percent of households that stored crops had little or no loss, (15%) of households had experienced a loss up to quarter (1/4), (4%) had a loss of between a quarter and a half (1/4 and 1/2) and (1%) had a loss of over a half (1/2) (Table .9).

District	Estimate Storage Loss				Total
	Little or no Loss	Up to 1/4 Loss	Between 1/4 and 1/2 Loss	Over 1/2 Loss	
Iringa Rural	47,813	12,045	4,218	714	64,790
Mufindi	71,697	14,839	3,926	1,014	91,476
Njombe	31,476	9,632	2,354	1,086	44,548
Ludewa	38,636	7,715	1,325	630	48,306
Makete	118,034	12,718	3,415	1,049	135,216
Iringa Urban	959	281	279	52	1,572
Kilolo	46,646	7,400	4,175	590	58,810
Total		64,630	19,692	5,135	

3.7.2 Agro processing and By-products

Agro processing refers to a process that converts a crop product from one form to another form in order to add or increase the palatability of the product. Agro-processing was practiced in most crop growing households in Iringa region (272,110 households, 98% of the total crop growing households) (Chart 3.94).

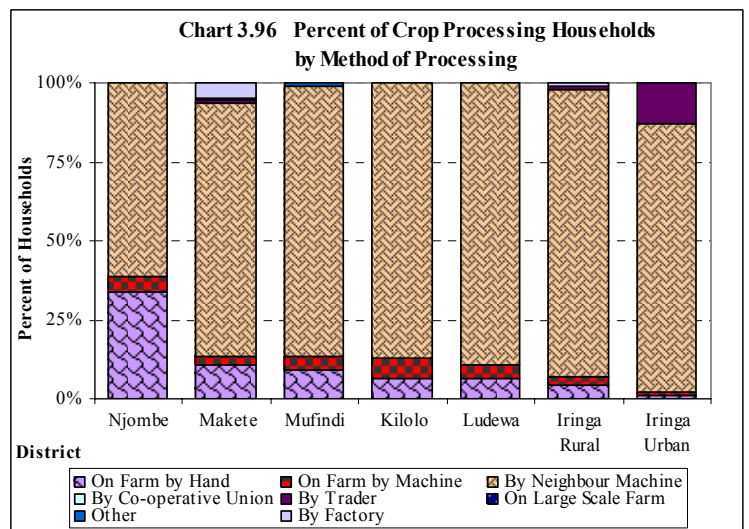
The percent of households processing crops was very high in all districts (between 96% and 99%) (Chart 3.95).



3.7.2.1 Processing Methods

Most crop processing households processed their crops using neighbour’s machines representing 83.6 percent (227,360 households). This was followed by those processing on-farm by hand (27,480 households, 10.1%), on farm by machine (10,322 households, 3.8%), by factory (4,438 households, 1.6%), by trader (1,515 households, 0.6%), other methods (801 households, 0.3%) and by Cooperative Unions (133 households, 0.05%). Processing by large scale farms is negligibly small.

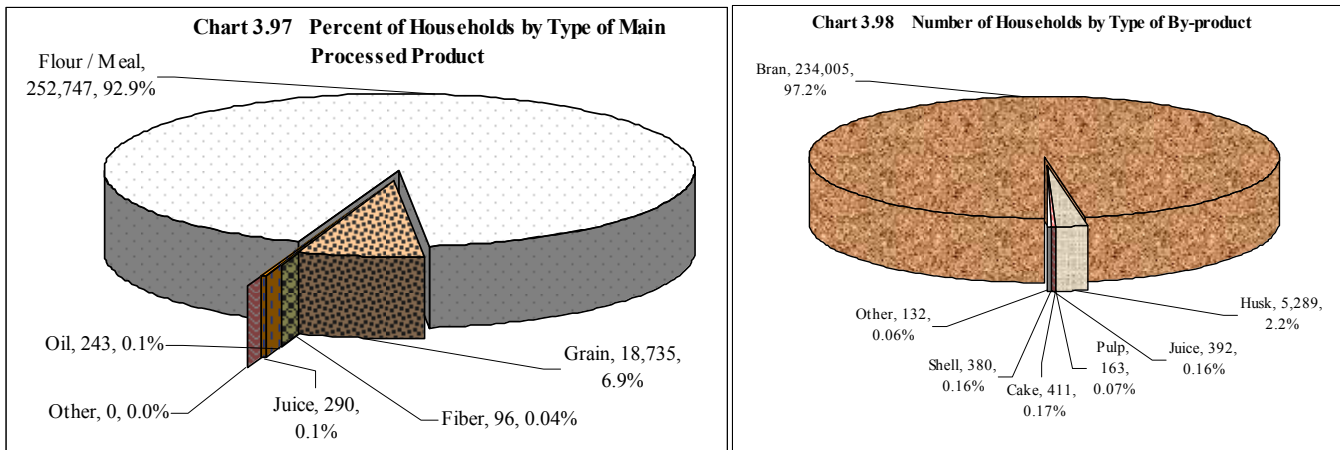
Although processing by machine was the most common processing method in all districts in Iringa region, district differences existed. Njombe has a higher percent of hand processing than other districts (34%), followed by Makete (11%) and Mufindi (9%). Processing by trader, though small, was more common in Iringa Urban (13%, Makete (1%) and Iringa Rural (1%). Though small, processing on farm by machine was practiced in all seven districts in the region (Chart 3.96).



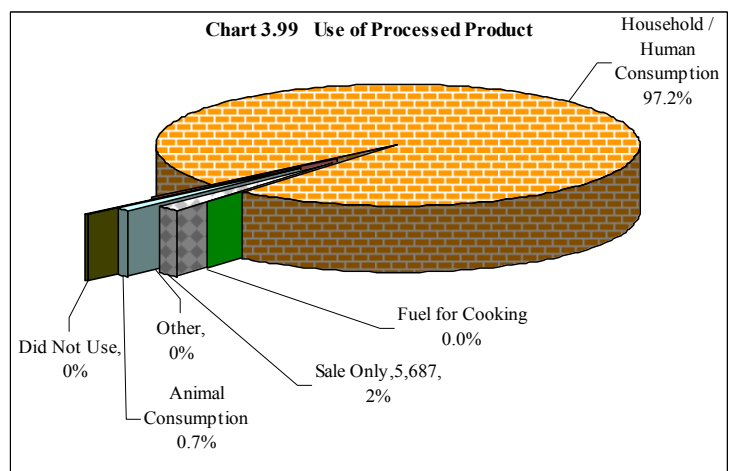
3.7.2.2 Main Agro-processing Products

Two types of products can be produced through agro-processing namely, the main product and the by-product. The main product is the major product after processing and the by-product is the secondary product after processing. For example, the main product after processing maize is normally flour whilst the by-product is normally the bran.

Flour/meal was the main processed product for 252,747 household representing 93 percent of all households that processed crops in the region. It was followed by grain with 18,735 households (7%). The remaining products were produced by very few households (Chart 3.97).



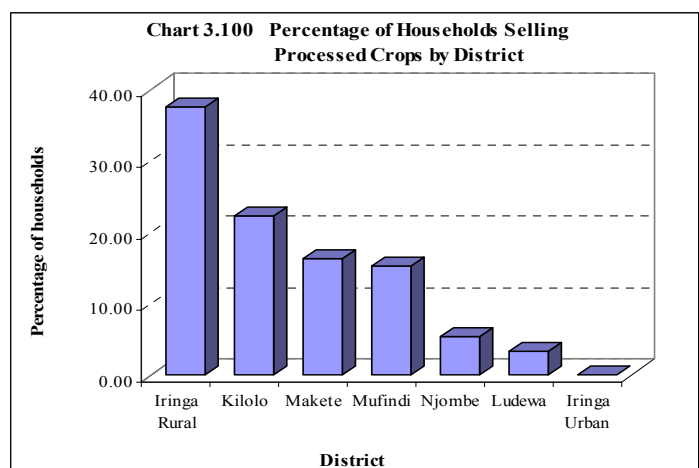
The number of households producing by-products accounted for 88.5 percent of the households processing crops. The most common by-product produced by crop processing households was bran with 234,005 households (97% of all households that produced by-products), followed by husks (5,289 households, 2%), cake (411 households, 0.17%), juice (392 households, 0.16%), shell (380 households, 0.15%), pulp (163 households, 0.07%) and others (132 households, 0.06) (Chart 3.98).



3.7.2.3 Main Use of Primary Processed Products

Primary processed products were used by households or human consumption, as fuel for cooking, for selling and for animal consumption. The most important use was for household/human consumption which represented 98 percent of the total households that used primary processed product (Chart 3.99).

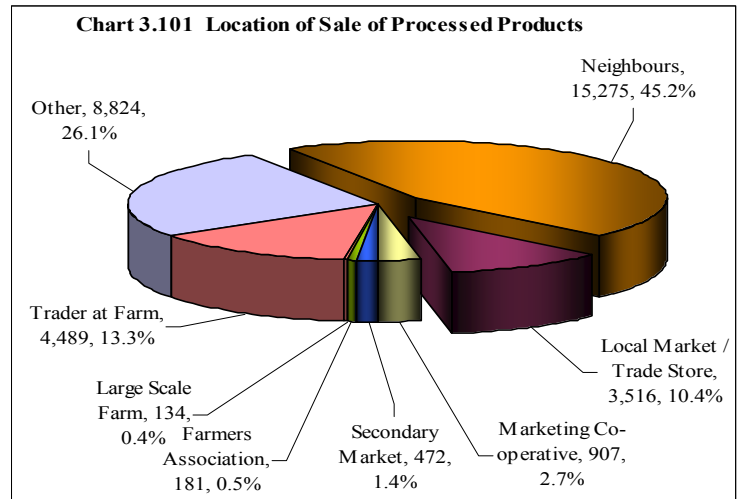
Kilolo and Njombe were the only districts that used primary products as fuel for cooking.



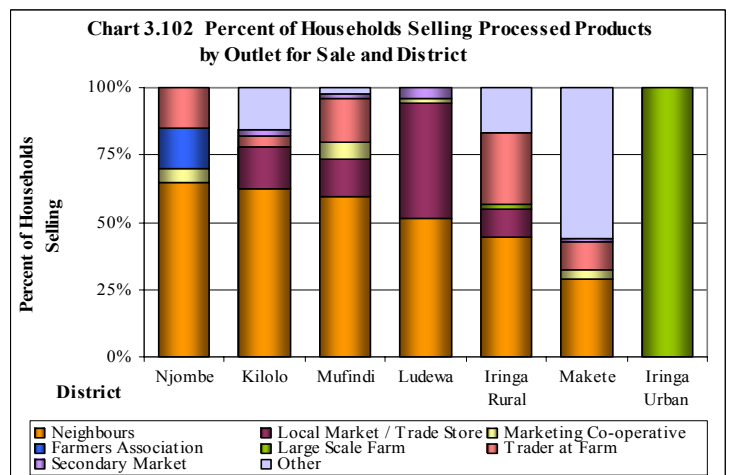
Out of 5,687 households that sold processed products, 2,138 were from Iringa Rural (37.6% of the total number of households selling processed products in the region), followed by Kilolo with 1,262 households (22.2%), Makete (925 households, 16.3%), Mufindi (869 households, 15.3%), Njombe (304 households, 5.3%) and Ludewa (189 households, 3.3%). Iringa Urban district did not indicate the selling of processed products (Chart 3.100).

3.7.2.4 Outlets for Sale of Processed Products

Most households that sold processed products sold to neighbours (15,275 households, 45% of households that sold crops). This was followed by selling to trader at farm (4,489 households, 13%), local market/tTrade store (3,516 households, 10%), marketing co-operatives (907 households, 3%), secondary market (472 households, 1%), farmer association (181 households, 0.5%) and large scale farm (134 households, 0.4%) (Chart 3.101).

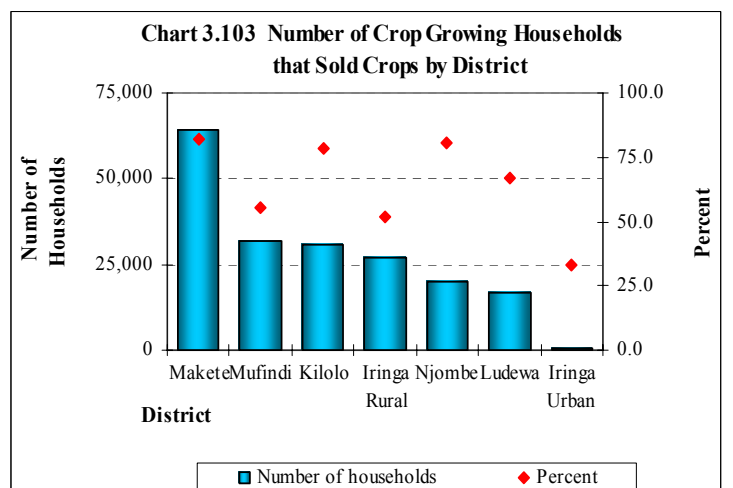


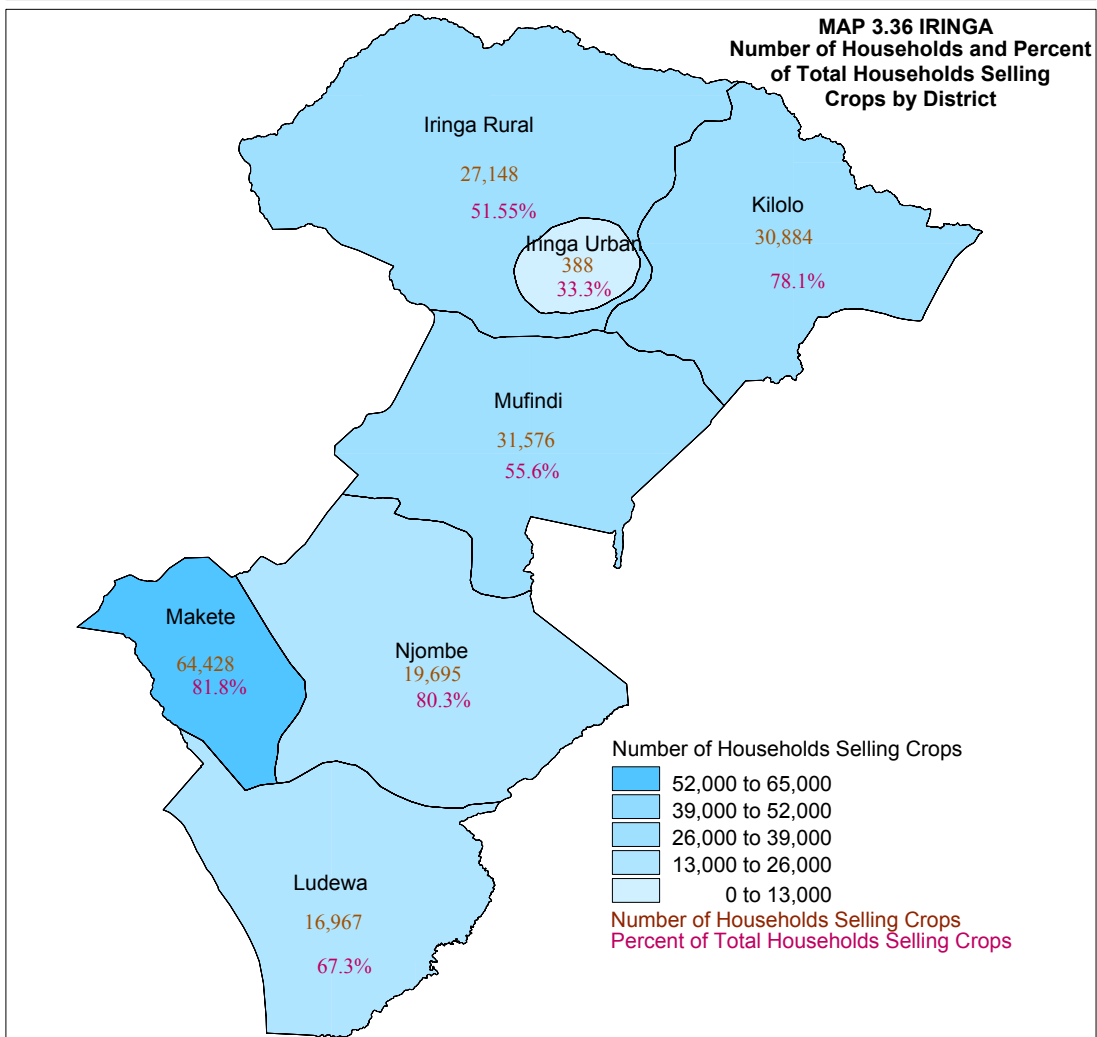
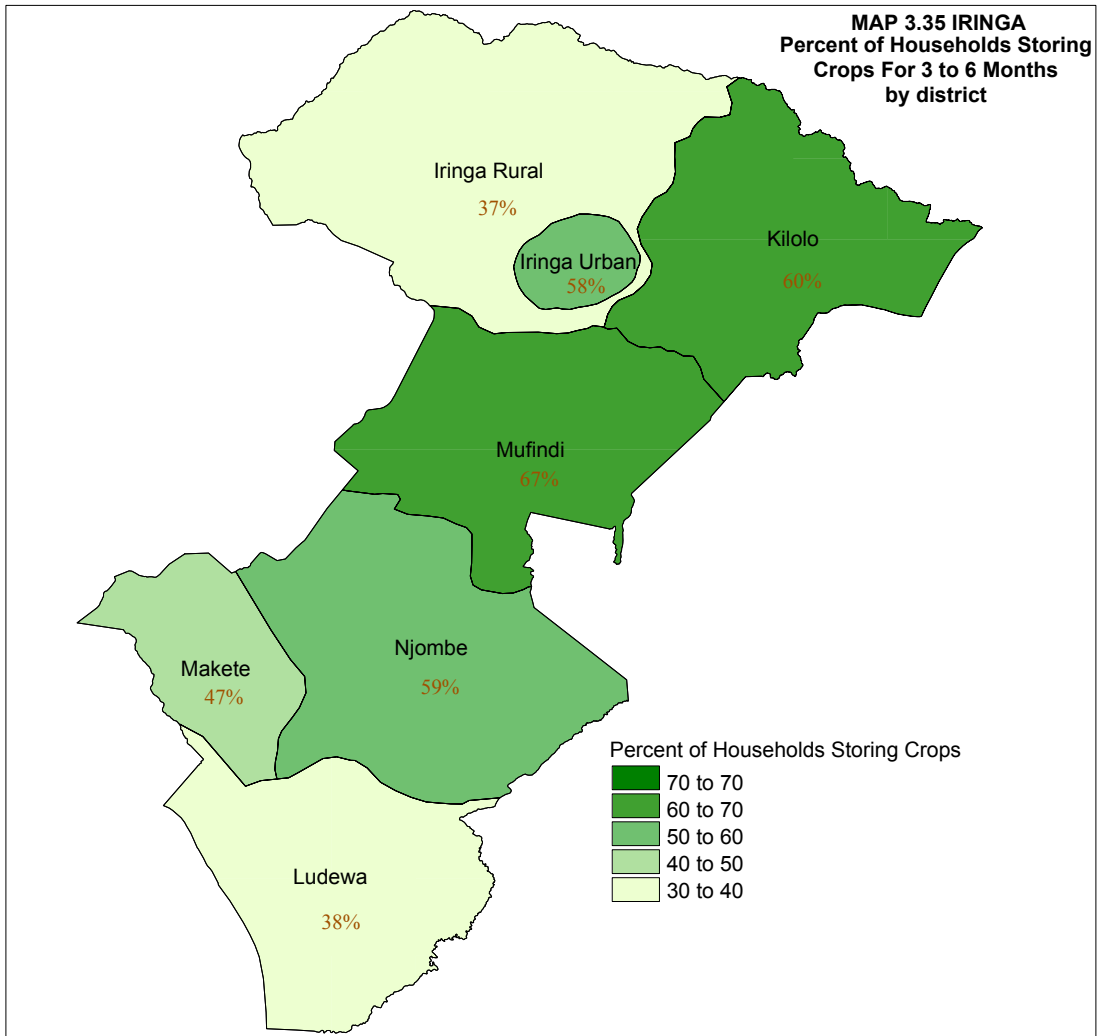
There are small differences between districts in the proportion of households selling processed products to neighbours, with Njombe district having the highest percent of households in the region (65%), followed by kilolo (63%), Mufindi (60%) and Ludewa (51%). Makete has only 29 percent of the households selling processed products to neighbours. Iringa Urban sell its processed products to large scale farms only. Ludewa has the highest proportion of households selling processed products to local markets /trade stores. Njombe is the only district in the region which sold its processed products to farmers associations (Chart 3.102).



3.7.3 Crop Marketing

The number of households that reported selling crops was 191,085 which represent 68.6 percent of the total number of crop growing households. The percent of crop growing households selling crops was highest in Makete (81%) followed by Njombe (80.3%), Kilolo (78.1%), Ludewa (67.3%), Mufindi (55.6%) Iringa Rural (51.5%) and Iringa Urban (33.3%) (Chart 3.103 and Map 3.36).

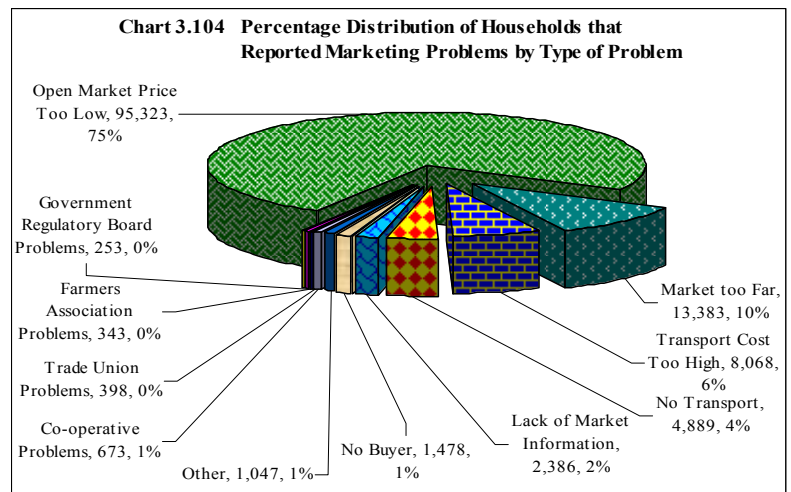




3.7.3.1 Main Marketing Problems

Low price for agricultural produce was the main marketing problem reported by agricultural households in Iringa region (75% of crop growing households in the region).

Apart from low market prices, other problems were longer distances to the markets (10%), high transport costs (6%), lack of transport (4%), lack of market information (2%) and lack of buyers (1%). Other marketing problems are minor and represented less than 1 percent of the total reported problems (Chart 3.104).



3.7.3.2 Reasons for Not Selling Crops

The main reason for not selling crops was “insufficient production to sell”, representing 91 followed by the price being low (5.4%). The remaining reasons for not selling are in such low numbers that it is not appropriate to rank their importance (Table 3.10).

Table 3.10 Reasons for Not Selling Crop Produce

Main Reason	Number of Households	%
Production Insufficient to Sell	97,575	91.1
Price Too Low	5,820	5.4
Other	1,519	1.4
Market Too Far	1,318	1.2
Co-operative Problems	424	0.4
Government Regulatory Board Problems	273	0.3
Farmers Association Problems	192	0.2
Trade Union Problems	13	0.0
Total	107,135	100.0

3.8 Access to Crop Production Services

3.8.1 Access to Agricultural Credit

The census results show that in Iringa region very few agricultural households (9,046, 3.2% of all crop growing households) accessed credit, out of which 6,796 (75%) were male-headed households and 2,251 (25%) were female headed households. In Iringa Rural, Mufindi and Kilolo districts only male headed households got agricultural credit whereas in Makete, Njombe and Ludewa both Male and Female headed households accessed agricultural credit. In No household in Iringa Urban district reported to have accessed agricultural credit (Table 3.11).

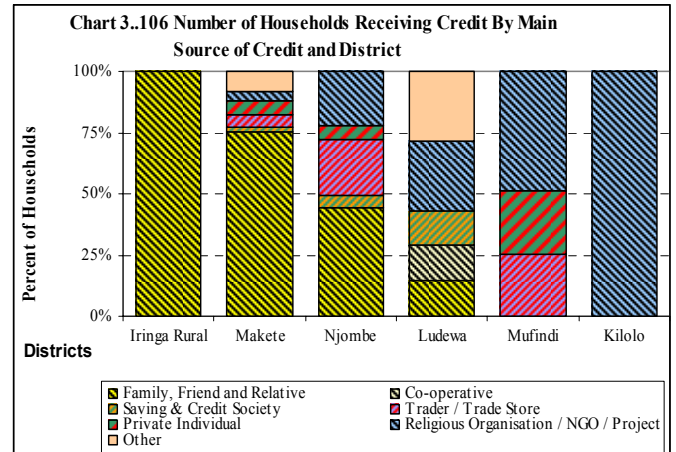
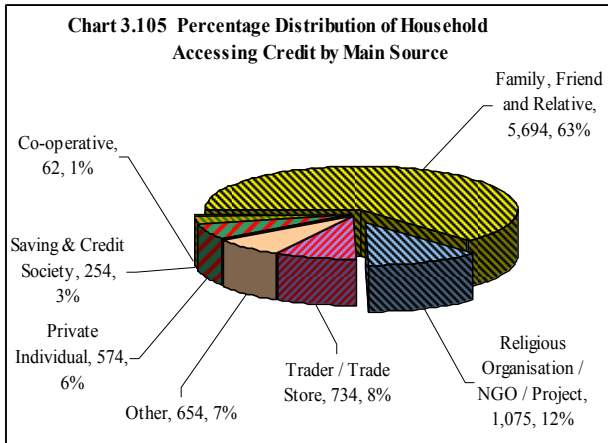
Table 3.11 Number of Agricultural Households That Received Credit By Sex of Household By District

District	Male		Female		Total
	Number	%	Number	%	
Iringa Rural	121	100	0	0	121
Mufindi	503	100	0	0	503
Makete	5,246	78	1,459	22	6,705
Njombe	606	56	485	44	1,091
Ludewa	121	28	307	72	428
Kilolo	198	100	0	0	198
Total	6,795	75	2,251	25	9,046

3.8.1.1 Source of Agricultural Credit

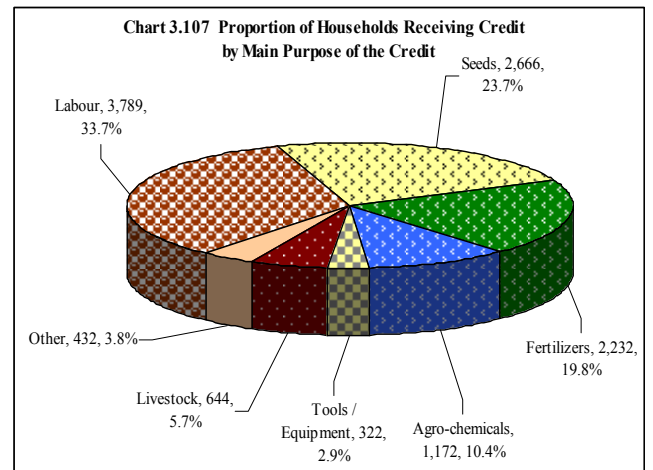
The major agricultural credit provider in Iringa region was family friend and relatives which provided credit to 5,694 agricultural households (63% of the total number of households that accessed credit), followed by Religious organizations/Non governmental organizations/projects (12%), trader/trade store (8%), other sources (7%), private individual (6%), saving and credit societies (3%) and co-operatives (1%). Family, friends and relatives was the only source of credit in Iringa Rural district, whilst religious organizations/non governmental organizations/projects were the sole source of credit in Kilolo. Makete district received credit from all major sources mentioned except from co-operatives.

On the other hand, religious organizations/non governmental organizations/projects were more involved in funding a relatively large number of households in Kilolo and Mufindi districts, however they also provided credit to other districts in the region except Iringa Rural and Iringa Urban districts. Trader/trader store was the only credit provider in Njombe, Mufindi and Makete districts. Cooperatives were only involved in providing credit to households in Ludewa district. (Chart 3.106).



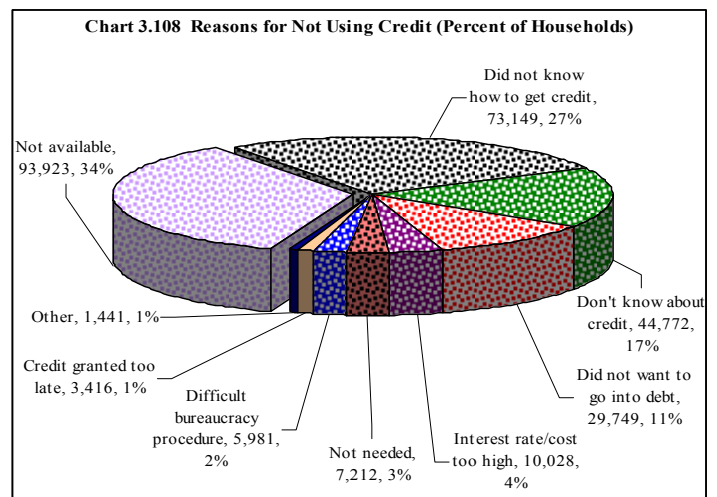
3.8.1.2 Use of Agricultural Credit

A large proportion of the agricultural credit provided to agricultural households in the region was used for hiring labour (33.7% of agricultural households receiving credit), followed by purchasing of seed (23.7%), buying fertilizers (19.8%), purchasing agro-chemical (10.4%), rearing livestock (5.7%), other (4%) and buying tools/equipment (2.9%) (Chart 3.107).



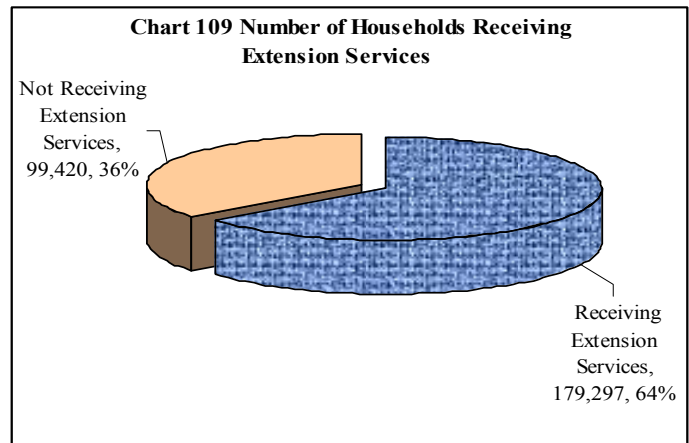
3.8.1.3 Reasons for Not Using Agricultural Credit

The main reason for agricultural households in Iringa region not using agricultural credit as a source of finance was because the credit itself was not available (35% of the agricultural households did not use credit). This was followed by households reporting that they “did not how to get credit” (27%), “don’t know about credit” (17%) and “did not want to get into debt” (11%). The rest of the reasons collectively accounted for less than 10 percent of the households in the region (Chart 3.108).



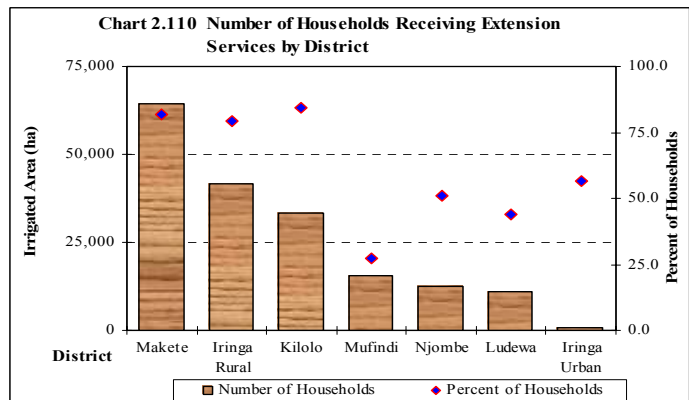
3.8.2 Crop Extension

The number of Agricultural households that received crop extension was 179,297, accounting for 64 percent of total crop growing households in the region (Chart 3.109). Some districts have more access to extension services than others. Kilolo had a relatively high proportion of households that received crop extension messages (84% of the agricultural households in the district), followed by Makete (82%), Iringa Rural (79%), Iringa Urban (57%), Njombe (51%), Ludewa (44%) and Mufindi (27%) (Chart 3.110 and Map 3.37).



3.8.2.1 Sources of Crop Extension Messages

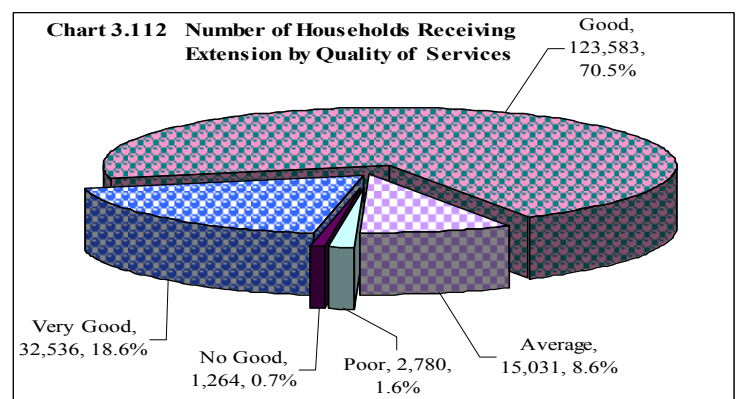
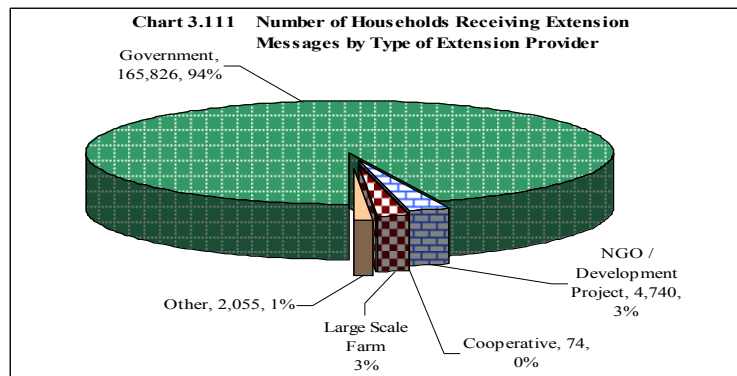
Of the households receiving extension advice, the Government provided the largest proportion (94%, 165,826 households), NGOs provided (3%, 4,740 households), large scale farms (2%, 3,072 households) and the remaining providers (less than 2%, 2,129 households) (Chart 3.111). However, district differences exist with the proportion of the households receiving advice from government services ranging from 99.0 percent in Iringa Rural district to 84.1 percent in Njombe.

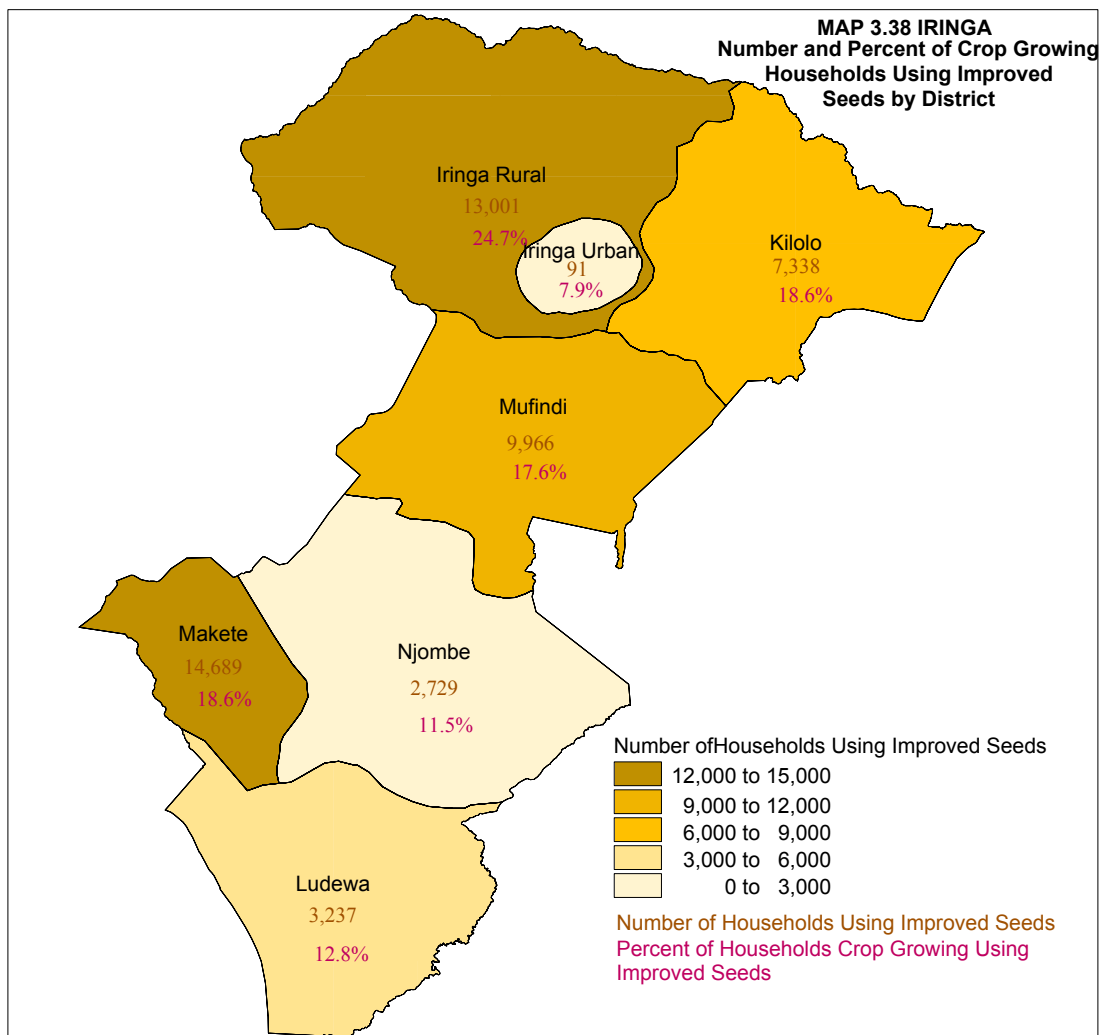
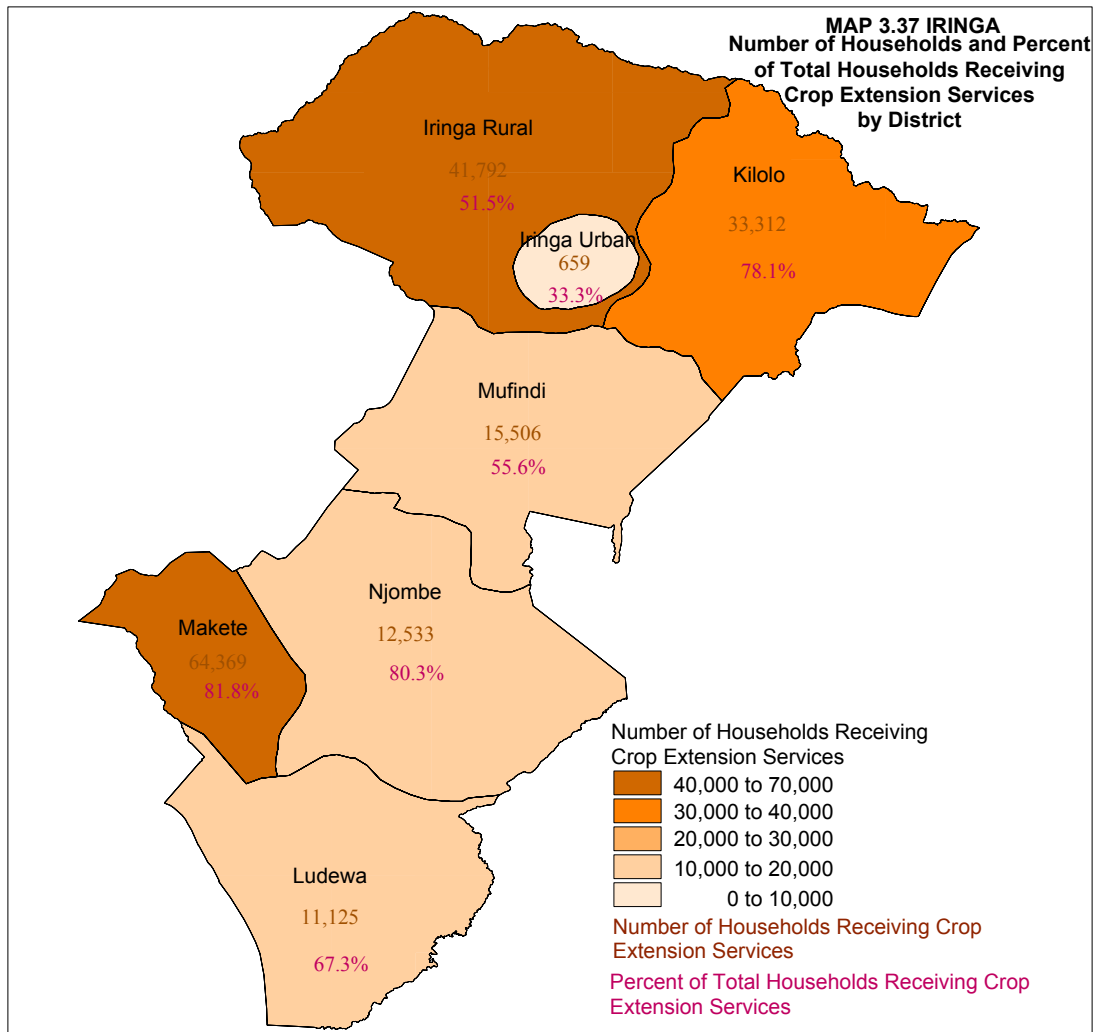


3.8.2.2 Quality of Extension

The result on the assessment of extension quality indicates that 70 percent of the households receiving extension ranked the service as being good, followed by very good (19%), average (9%), poor (2%) and no good (1%) (Chart 3.112).

However, care should be exercised when making decisions on quality of extension and also on other variables in the extension section as all the enumerators were extension agents and some degree of bias may be expected.





3.9 Access to Inputs

3.9.1 Use of Inputs

Access to inputs in this section refers to all crop growing households in Tanzania regardless of whether the household grew annual or permanent crops. In previous sections the reference was on annual crops only. Because of this, the figures presented in this section may be different from the previous section on inputs (Section 3.5). Data on the source of inputs is only found in this section and it applies to both annual and permanent crops.

At national level a small number of households use inputs, however Iringa region has a high use of inputs compared to other regions. Pesticides/fungicides were used by 144,605 households which represent 51.9 percent of the total number of crop growing households in the region. This is followed by households that used inorganic fertilisers (36.4%), farm yard manure (33%), improved seeds (17.9%), compost (8.3%) and herbicide (1.3%) (Table 2.12).

Table 3.12 Use of Inputs

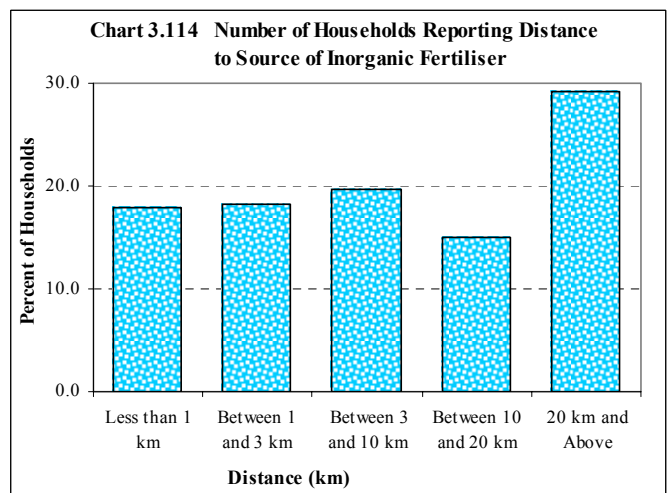
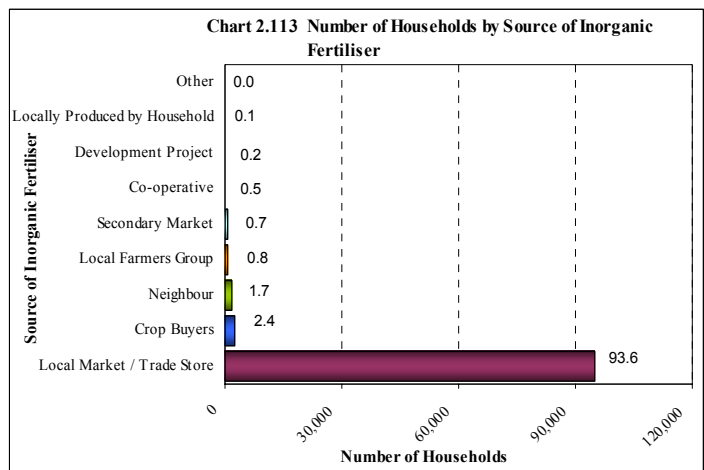
Type of Input	Households With Access to Input		Households Without Access to Inputs	
	Number	%	Number	%
Farm Yard Manure	92,023	33	186,694	67
Improved Seeds	49,920	18	229,063	82
Pesticides/Fungicide	144,605	52	134,112	48
Compost	23,221	8	255,594	92
Inorganic Fertiliser	101,518	36	177,331	64
Herbicide	3,548	1	275,133	99

3.9.2 Inorganic Fertilisers

Smallholders that use inorganic fertiliser in Iringa region mostly purchase it from the local market/trade store (93.6% of the total number of inorganic fertiliser users). The remaining sources of inorganic fertilisers are minor (Chart 3.113).

Access to inorganic fertiliser is mainly less than 10 km from the household with 20 percent of households residing between 3 and 10 km from the source, followed by between 1 and 3 km (18.2%) and less than 1 km (17.9%). However, 29.2 percent of agricultural households in the region reside 20 km or more from the source of inorganic fertilisers (Chart 3.114).

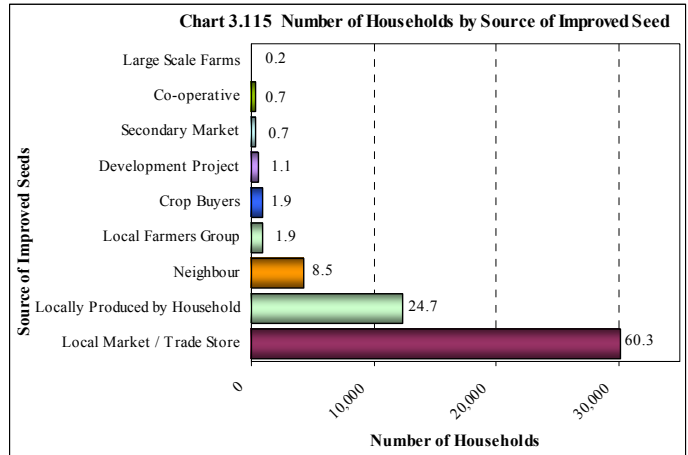
Due to the small number of households using inorganic fertilisers (36%) coupled with the small number of households responding to “not available” (6%) as the reason for not using, it may be assumed that access to inorganic fertiliser is not the main reason for not using it. Other reasons such as costs are more important with 82 percent of households responding to cost factors as the main reason for not using. In other words, it is assumed that if the cost was affordable, the demand would be higher and access to inorganic fertilisers would be made more available. More smallholders use inorganic



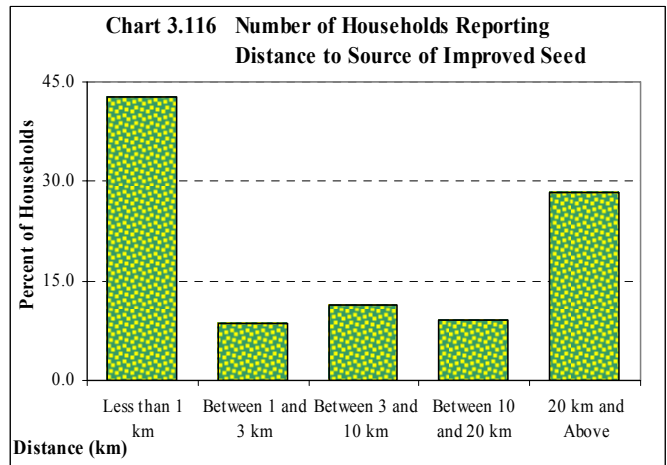
fertilisers in Iringa Urban than in other districts in Iringa region (63% of crop growing households), followed by Njombe (61%). The remaining other districts use very little inorganic fertiliser (less than 35% of households).

3.9.3 Improved Seeds

The percent of households that used improved seeds was 18 percent of the total number of crop growing households in Iringa region. Most of the improved seeds are from local market/trade stores (60.4%). Other sources of improved seed are locally produced (24.8%), neighbour (8.5%), crop buyers/local farmer group (1.9% each), development partners (1.1%), co-operative/ secondary market (0.7) each and large scale farms (0.2%) Chart 3.115).



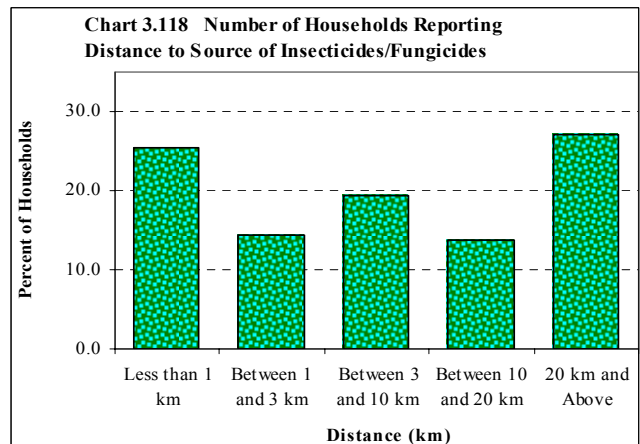
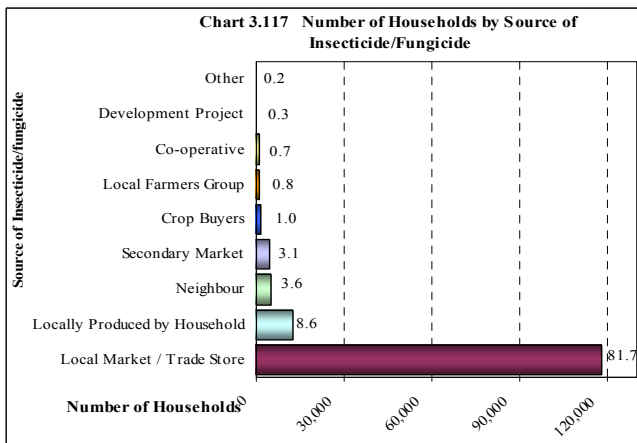
Access to improved seeds is better than access to chemical inputs with 43 percent of households obtaining the input within 1 km of the household (Chart 3.116). This is in line with the higher use of improved seeds compared to chemical inputs, which further supports the concept that it is not the availability that is the main issue in the use of inputs but rather other factors such as cost. It should be noted that 28 percent of agricultural households in the region reside 20 km or more from the source of inorganic fertilisers.



More smallholders use inorganic fertilisers in Kilolo and Mufindi (20% of crop growing households in the respective district), Iringa Rural (19.5%), Njombe (18.9%), Makete (12.2%), Ludewa (8.6%) and Iringa Rural (7.9%) (Map 3.38).

3.9.4 Insecticides and Fungicides

Most smallholder households using insecticides and fungicides mainly purchase them from local markets/trade stores (82% of the total number of insecticides/fungicide users). Other sources of insecticides/fungicides are of minor importance (Chart 3.117). Other reasons such as cost are more important with 72 percent of households responding to cost factors as



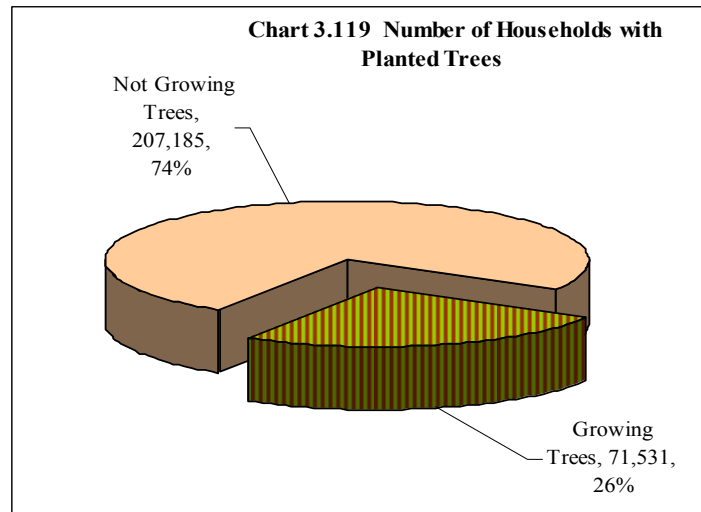
the main reason for not using. In other words, it is assumed that if the cost was affordable, the demand would be higher and access to insecticides/fungicides would be made more available.

Chart 3.118 shows that there is no distinct pattern for the number of households at varying distances from the source of insecticides/fungicides in Iringa region. Fungicides are mostly used in Njombe and Ludewa (65% of the total number of households using fungicides respectively), followed by Mufindi (64%), Kilolo (48%), Iringa Urban (36%), Makete (33%) and Iringa Rural (26%) (Map ???).

3.10 Tree Planting

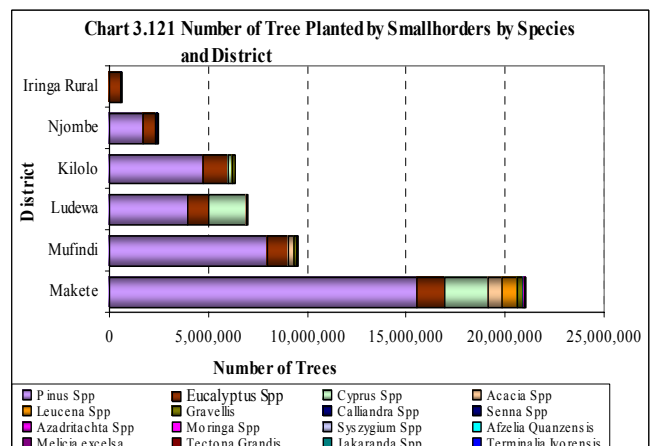
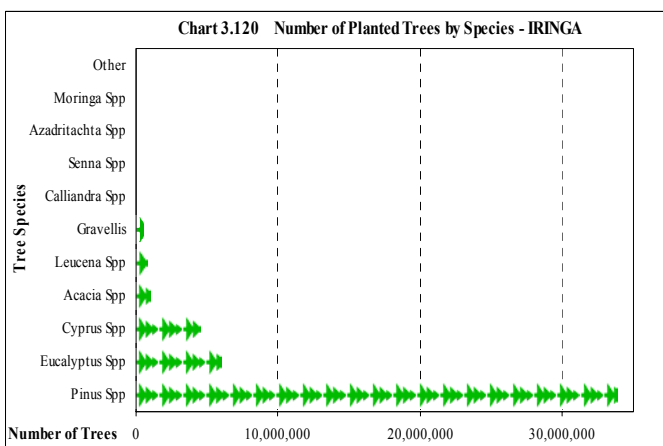
The number of households involved in tree farming was 71,531 representing 26 percent of the total number of agriculture households in the region (Chart 3.119).

The number of trees planted by smallholders on their allocated land was 46,922,422 trees. The average number of trees planted per household that plant trees on their land was 656 trees.



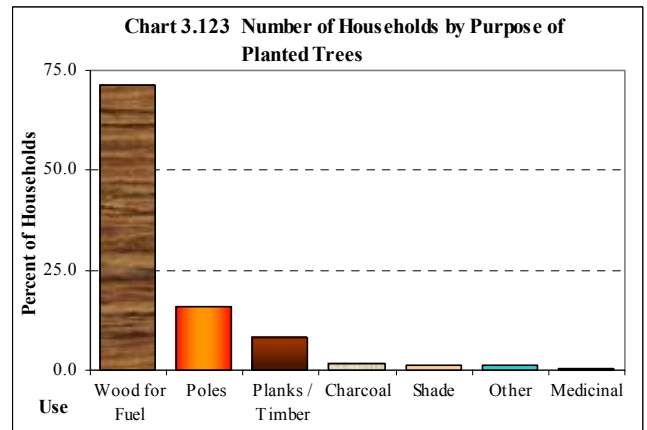
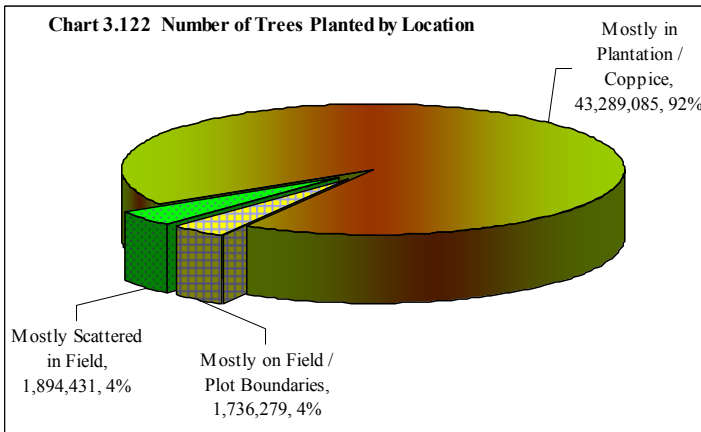
The main tree species planted by smallholders in Iringa is Pinus spp (33,903,348 trees, 72.2%), followed by Eucalyptus (5,950,507, 12.7%), Cyprus spp (4,485,037 trees, 9.6%). The remaining trees species are planted in comparatively small numbers (Chart 3.120).

Makete has the largest number of smallholders with planted trees than any other district in Iringa region (39.6%), followed by Mufindi (18%) and Kilolo (16%). The dominating species in all districts in Iringa region is Pines spp and to a lesser extent Eucalyptus spp and Cyprus spp (Chart 3.121 and Map 3.39).



Most trees are planted in plantations (43,289,085 trees, 92% of the total trees in Iringa region), followed by those planted “mostly scattered in the field” (1,894,431 trees, 4%) and those “mostly on field/plot boundaries” (1,736,279 trees, 4%) (Chart 3.122).

The main purpose of planting trees is wood for fuel (71.1%). This is followed by poles (15.9%), planks/timber (1.6%), shade (1.3%), other (1.3%) and medicinal (0.6%) (Chart 3.123).

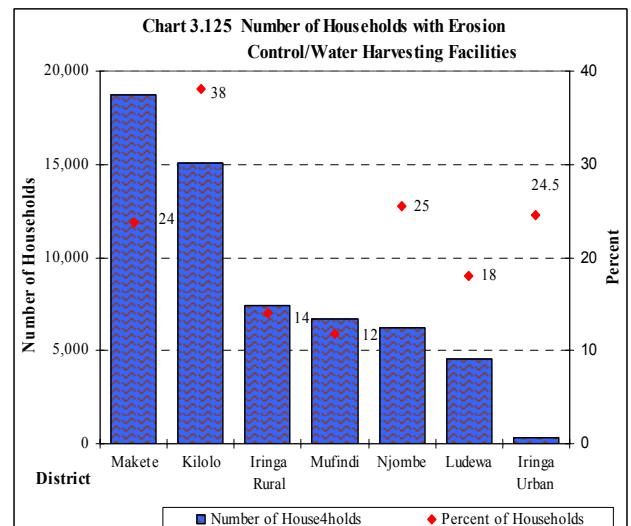
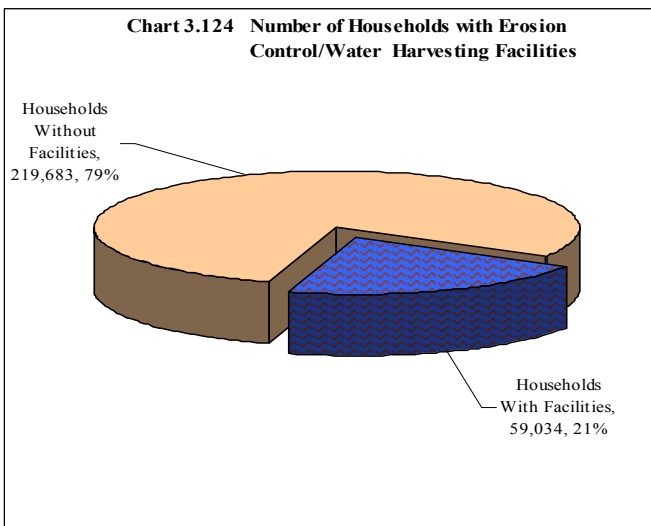


3.11 Irrigation and Erosion Control Facilities

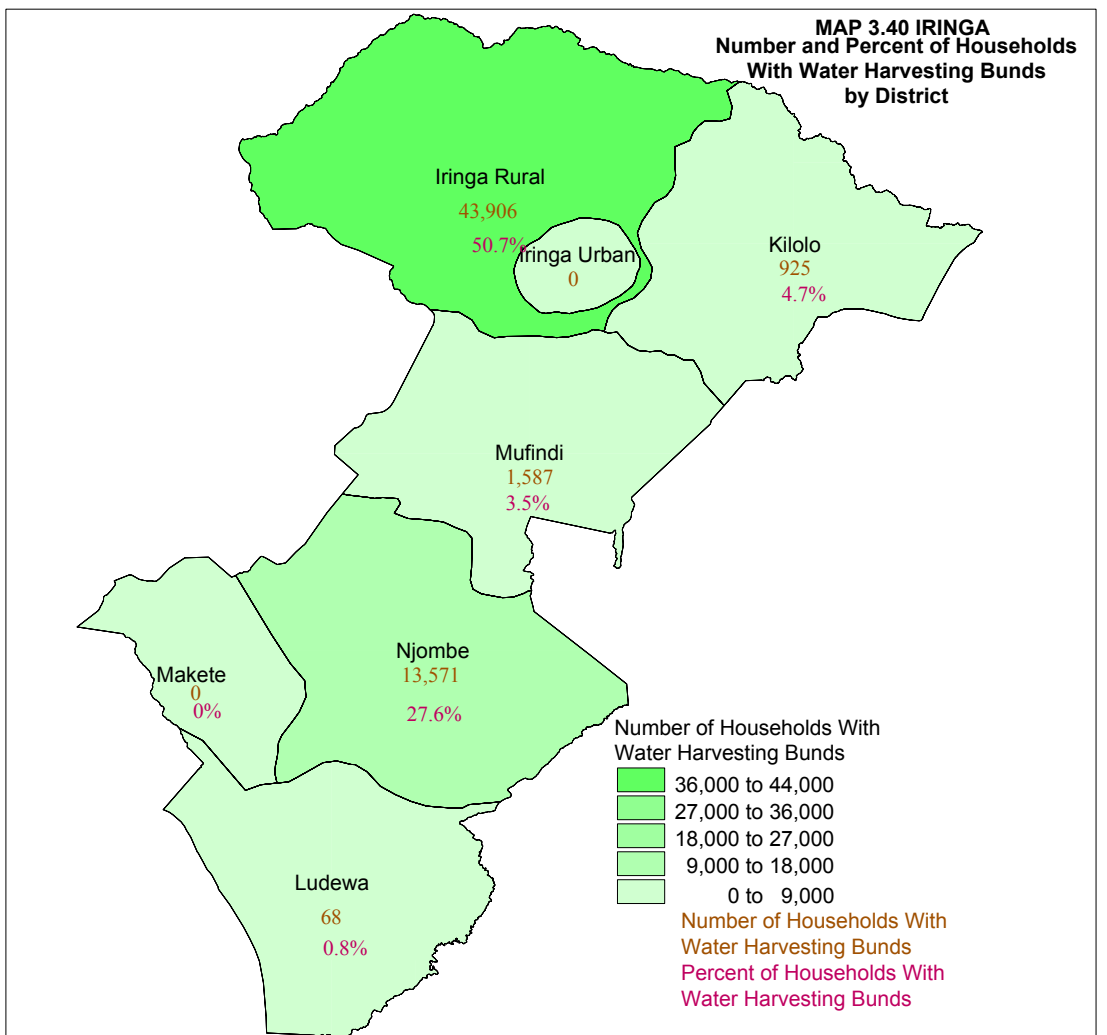
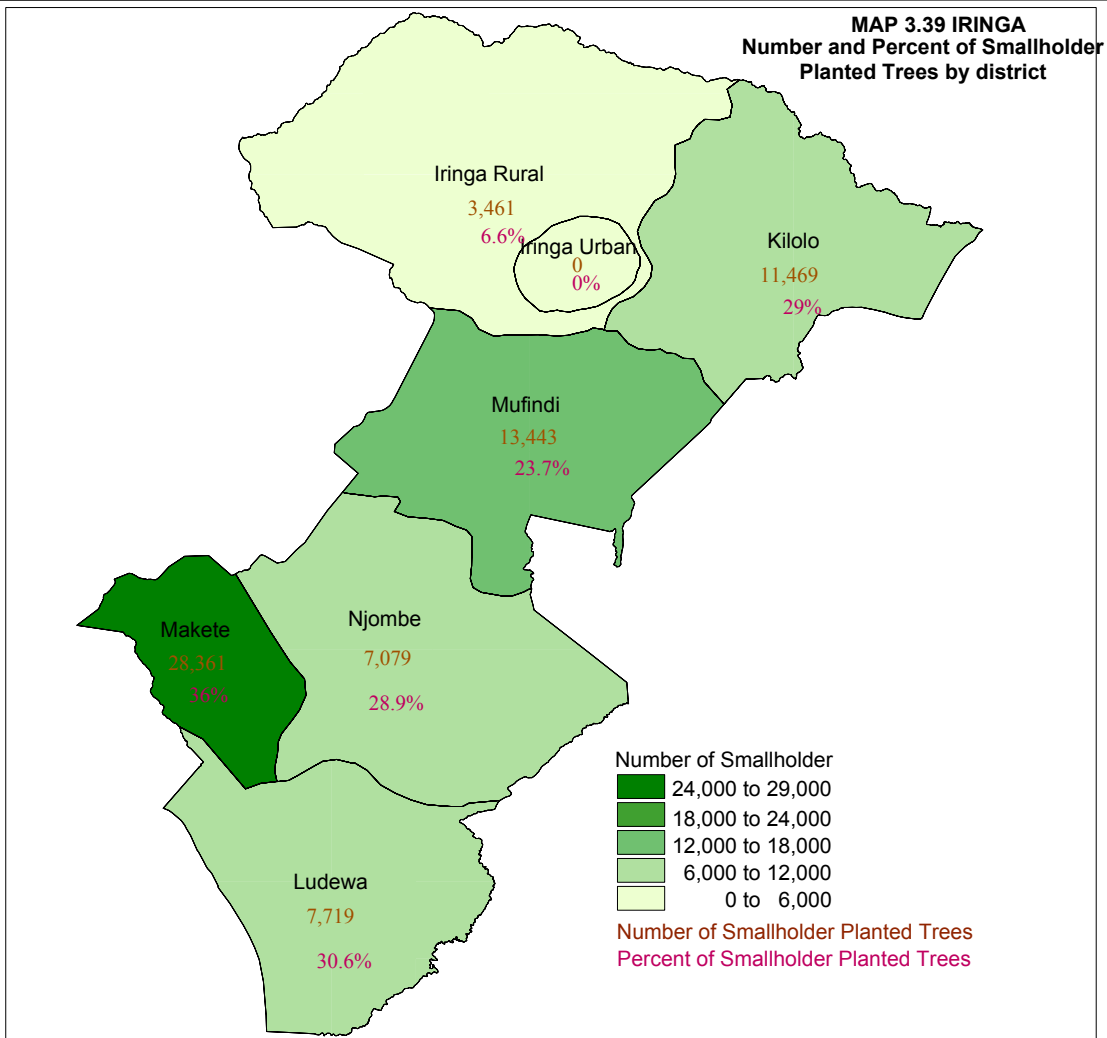
Erosion control and water harvesting facilities are grouped together as they normally have dual purposes of reducing erosion and increasing the amount of water available for crop production.

The number of agricultural households that had soil erosion and water harvesting facilities on their farms in Iringa region was 59,034 which represent 21 percent of the total number of agricultural households in the region (Chart 3.124).

The largest number of households with erosion control and water harvesting facilities are found in Makete district (18,726 households, 31.7% of the total households with erosion control and water harvesting facilities in Iringa region), followed by Kilolo (15,068 households, 25.5%), Iringa Rural (7,421 households, 12.6%), Mufindi (6,724 households, 11.4%), Njombe (6,248 households, 10.6%), Ludewa (4,562 households, 7.7%) and Iringa Urban (285 households, 0.5%).

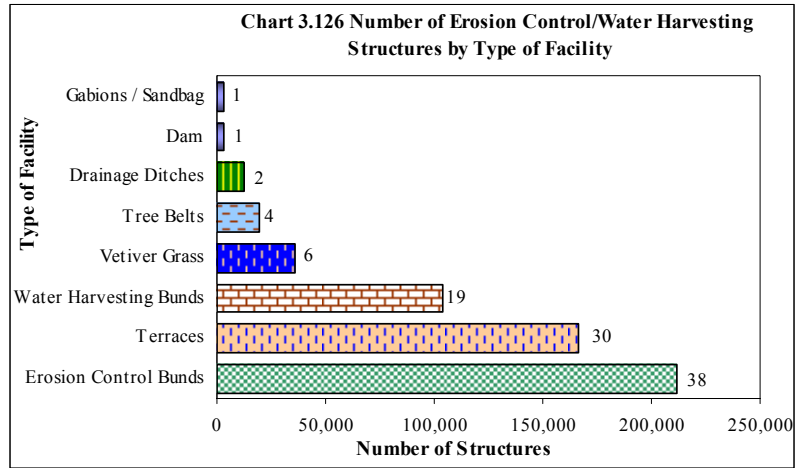


However, proportion of households with soil erosion control and water harvesting facilities was highest in Kilolo district (38% of the total agricultural households in the district), followed by Njombe (25%), Iringa Urban (24.5%), Makete (24%), Ludewa (18%), Iringa Rural (14%) and Mufindi (12%) (Chart 3.125 and Map 3.40).



Erosion Control Bunds accounted for 38.1 percent of the total number of structures, followed by terraces (29.9%), water harvesting bunds (18.7%), vetiver grass (6.5%), tree belts (3.5%), drainage ditches (2.2%), dams (0.6%) and gabions/sandbags (0.5%) (

Erosion control using erosion control bunds, terraces, and water harvesting bunds together had 481,401 structures. This represents 87 percent of the total structures in the region. The remaining 13 percentages were shared among the rest of the erosion control methods mentioned above (Chart 3.126 and Map ???). Kilolo and Makete districts had 339,788 erosion control structures (61.2 percent of the total erosion structures in the region).



3.12 LIVESTOCK RESULTS

Cattle are the dominant livestock type in the region followed by goats, sheep and pigs.

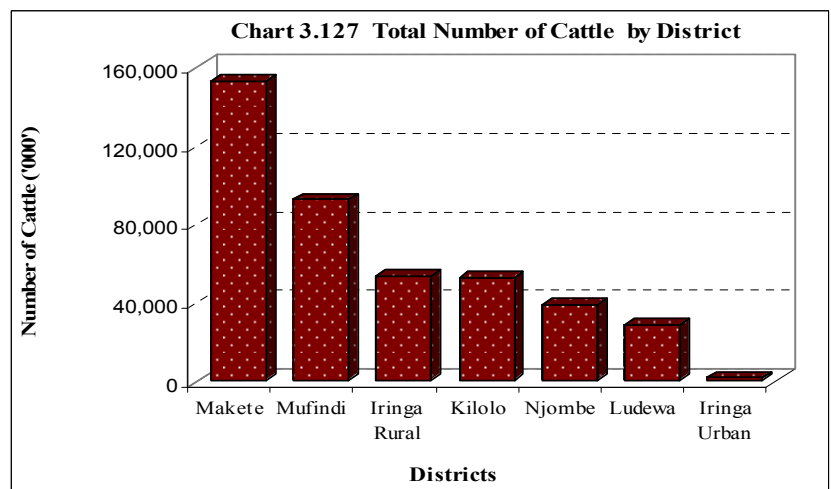
3.12.1 Cattle production

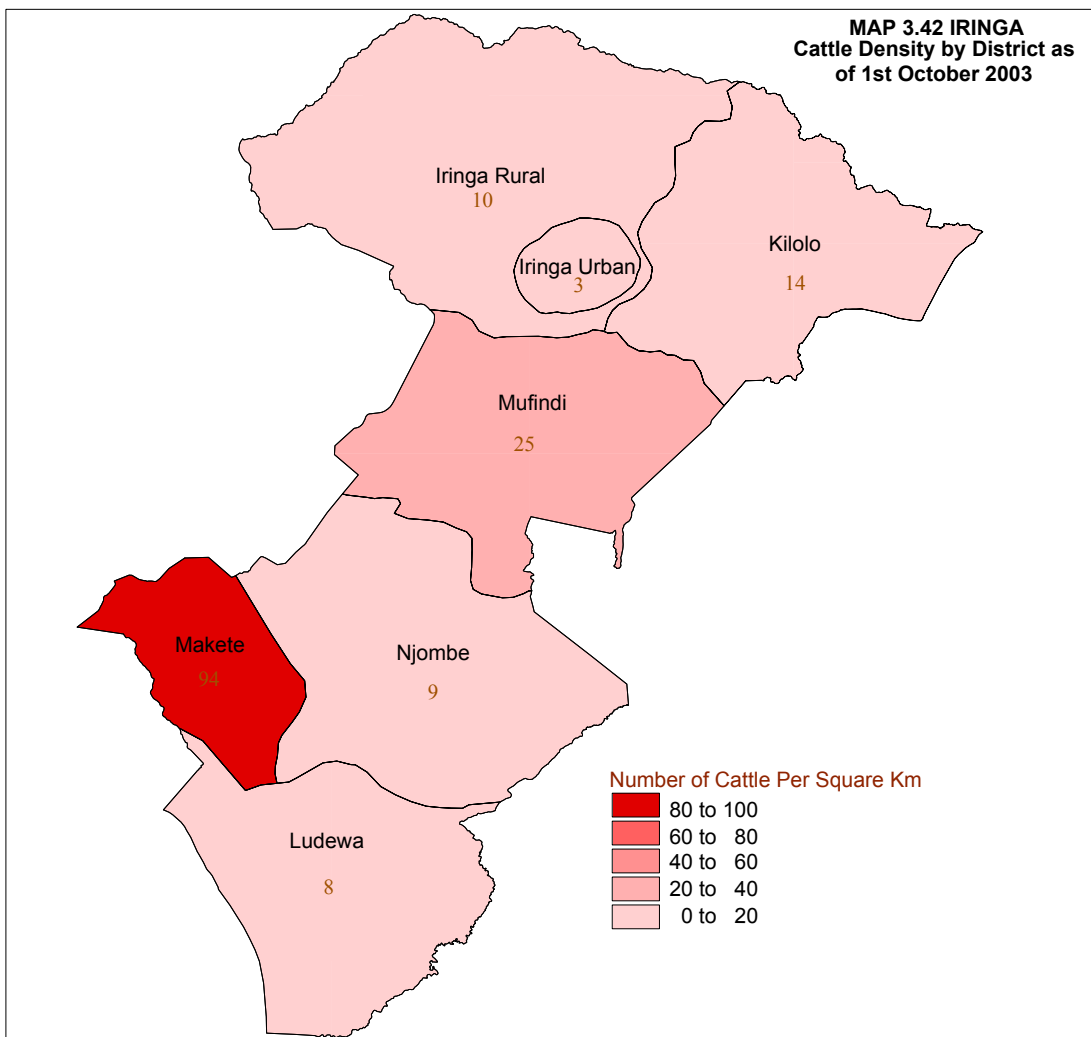
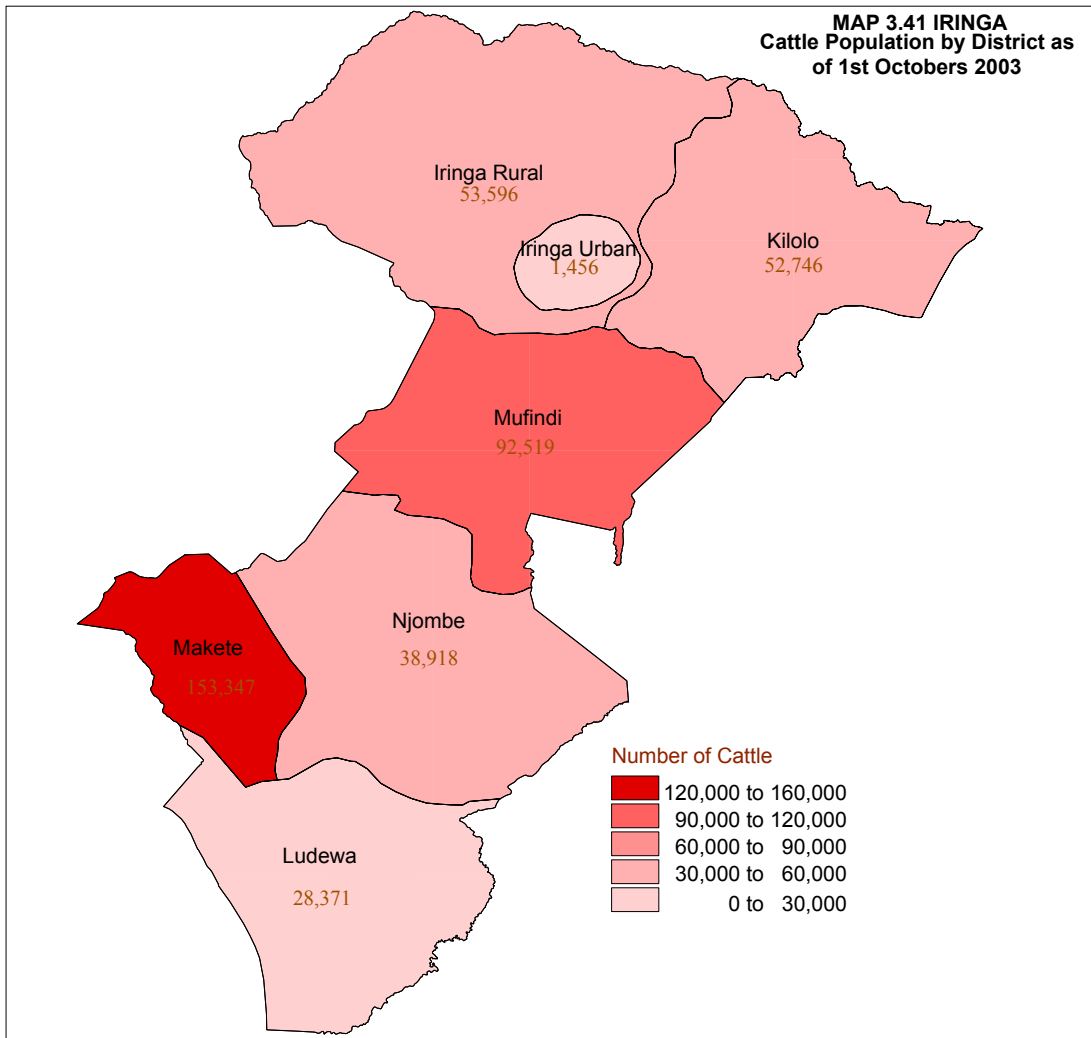
3.12.1.1 Cattle Population

The total number of cattle in the region was 420,954 and it had 2.5 percent of the total cattle population on Tanzania Mainland.. The number of indigenous cattle in Iringa region was 401,773 (95.4% of the total number of cattle in the region), dairy cattle (17,522 cattle, 4.2%) and beef cattle (1,659 cattle, 0.4%).

The census results show that 53,829 agricultural households in the region (19.3% of total agricultural households) kept 0.42 million cattle.

This was equivalent to an average of 8 head of cattle per cattle keeping household. The district with the largest number of cattle was Makete which had about 153,347 cattle (36.4% of the total cattle in the region). This was followed by Mufindi (92,519 cattle, 22%), Iringa Rural (53,596 cattle, 12.7%), Kilolo (52,746 cattle, 12.5%), Njombe (38,918 cattle, 9.2%) Ludewa (28,371 cattle, 6.7%) and Iringa Urban (1,456 cattle, 0.3) (Chart 3.127 and Maps 3.41 and 3.42).



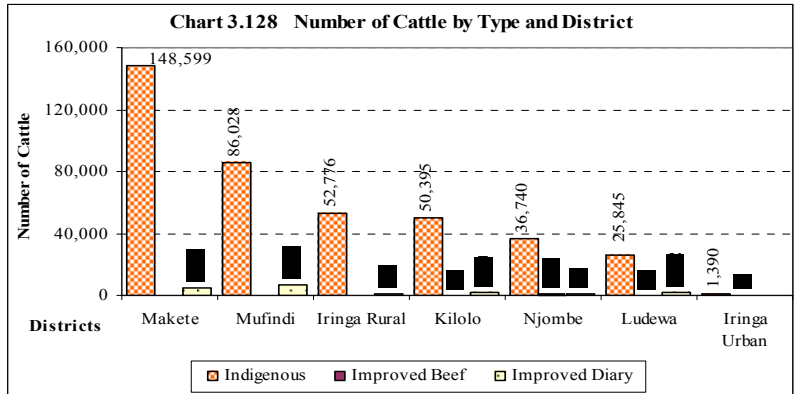


The number of dairy cattle was very small and the number of beef cattle was insignificant. Mufindi district had the largest number of dairy cattle in the region (Chart 3.128).

3.12.1.2 Herd Size

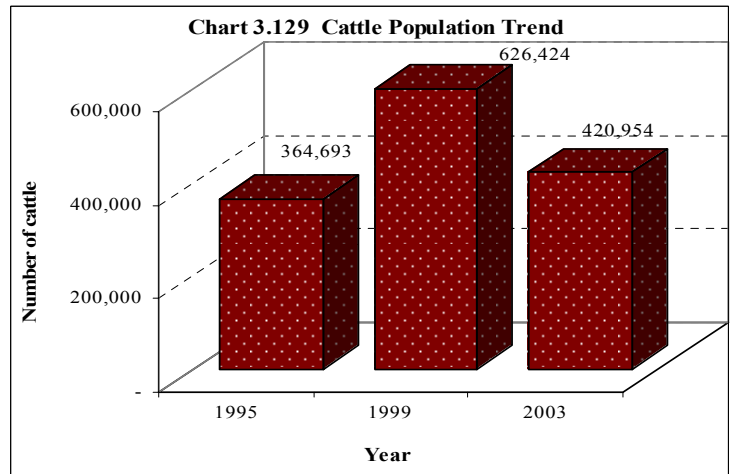
Nineteen percent of the cattle-rearing households had herd size of 1-5 cattle, with an average of three cattle per household. Herd size of 6-30 accounted for about 70 percent of all cattle in Iringa region.

Only 10 percent of the cattle rearing households had herd sizes of 31- 100 cattle. About 94 percent of total cattle rearing households had herds of size 1-20 cattle and owned 74 percent of total cattle in the region, resulting in an average of 6 cattle per cattle rearing household. There were about 74 households with a herd size of 61 or more cattle (a total of 4,666 cattle) resulting in an average of 63 cattle per household.



3.12.1.3 Cattle Population Trend

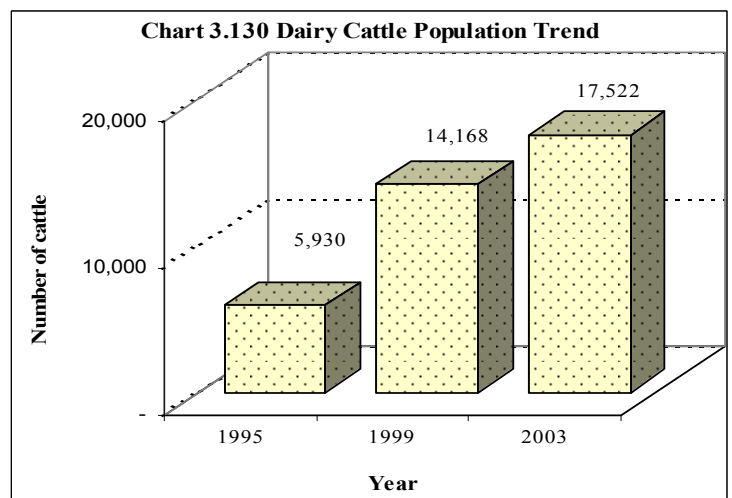
Cattle population in Iringa region increased during the period of eight years from 364,693 in 1995 to 420,954 cattle in 2003. This trend depicts an overall annual positive growth rate of 14.5 percent (Chart 3.129).



However, there was a very sharp increase in the number of cattle for the period of four years from 1995 to 1999 at a rate of 24.3 percent, after which the number decreased from 626,424 in 1999 to 420,954 in 2003 at the rate of 5.5 percent.

3.12.1.4 Improved Cattle Breeds

The total number of improved cattle in Iringa region was 19,181 (17,522 dairy and 1,659 improved beef). The dairy cattle constituted 4.2 percent of the total cattle and 91.4 percent of improved cattle in the region. The number of beef cattle in the region constituted only 8.6 percent of the total number of the improved cattle and 0.4 percent of the total cattle. The number of improved dairy increased from 5,930 in 1995 to 17,522 in 2003 at an annual growth rate of 14.5 percent. The rate of growth was higher for the period from 1995 to 1999 (24.3%) than from 1999 to 2003 (5.6%) (Chart 3.130).

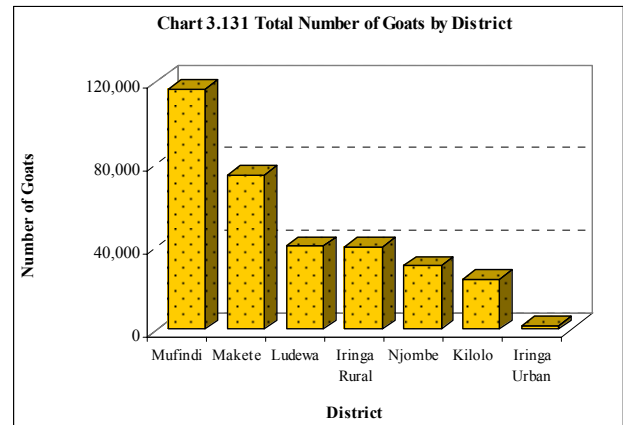


3.12.2 Goat Production

Goat rearing was the second most important livestock keeping activity in Iringa region. In terms of total number of goats on the Mainland, Iringa region ranked 10 out of the 21 regions with 2.6 percent of the total goats on the Mainland.

3.12.2.1 Goat Population

The number of goat-rearing-households in Iringa region was 41,706 (15% of all agricultural households in the region) with a total of 327,476 goats giving an average of 8 heads of goats per goat-rearing-household. Mufindi had the largest number of goats (116,480 goats, 36% of all goats in the region), followed by Makete (74,661 goats, 23%), Ludewa (40,165 goats, 12%), Iringa Rural (39,965 goats, 12%), Njombe (30,637 goats, 9%), Kilolo (25,967 goats, 8%) and Iringa Urban (1,601 goats, 1%) (Chart 3.13 and maps 3.43 and 3.44).



3.12.2.2 Goat Herd Size

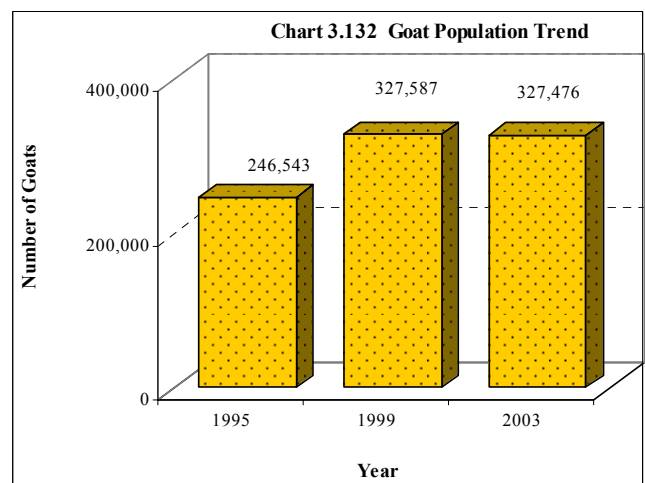
Fifty five percent of the goat-rearing households had herd size of 1-4 goats with an average of 3 goats per goat rearing household. About 93 percent of total goat-rearing households had a herd size of 1-14 goats and owned 53 percent of the total goats in the region, resulting in an average of 5 goats per goat-rearing households. The region had 669 households with herd sizes of 40 or more goats each (105,220 goats in total), resulting in an average of 157 goats per household.

3.12.2.3 Goat Breeds

Goat husbandry in the region was dominated by the indigenous breeds that constituted 97 percent of the total goats in Iringa region. Improved goats for diary and meat production constituted only 2 and 1 percent of total goats respectively.

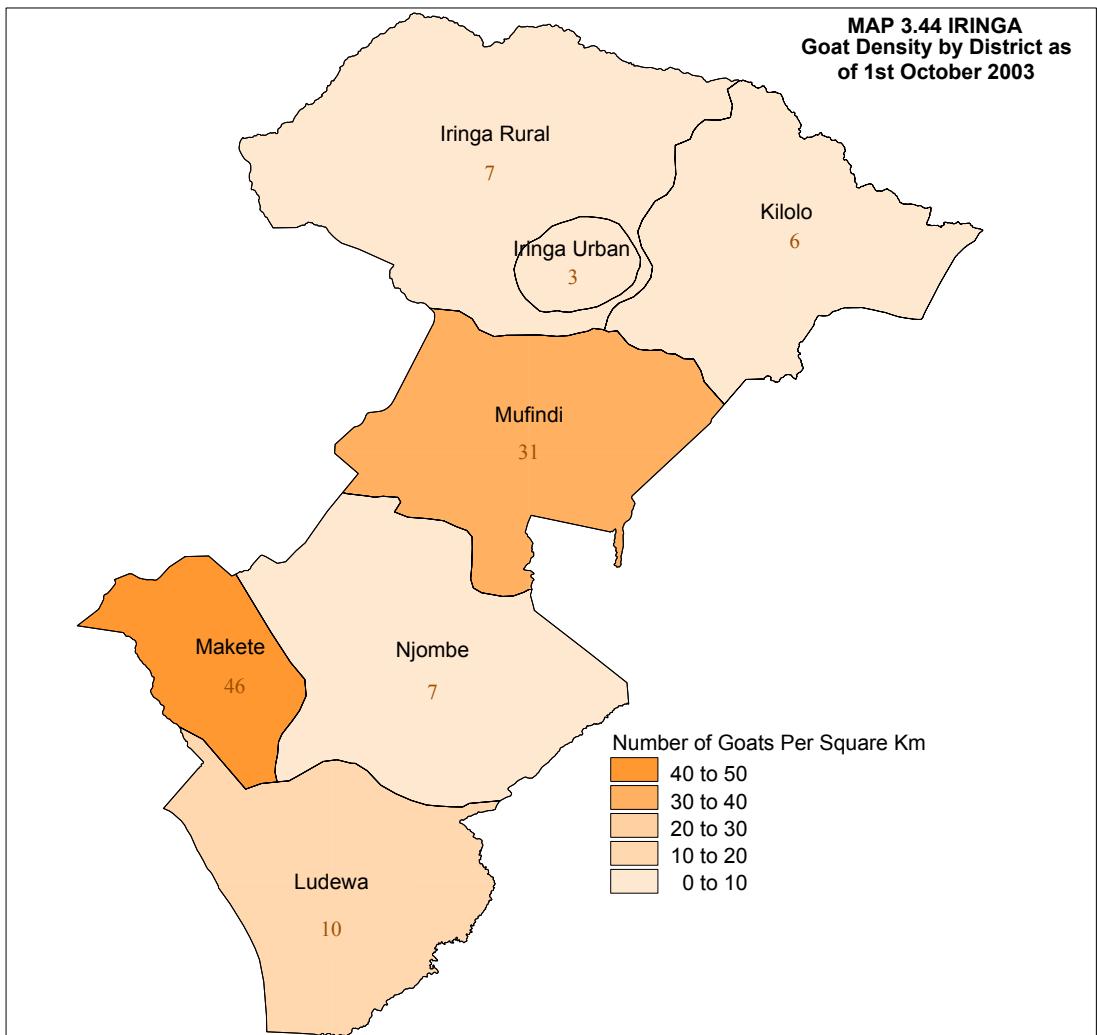
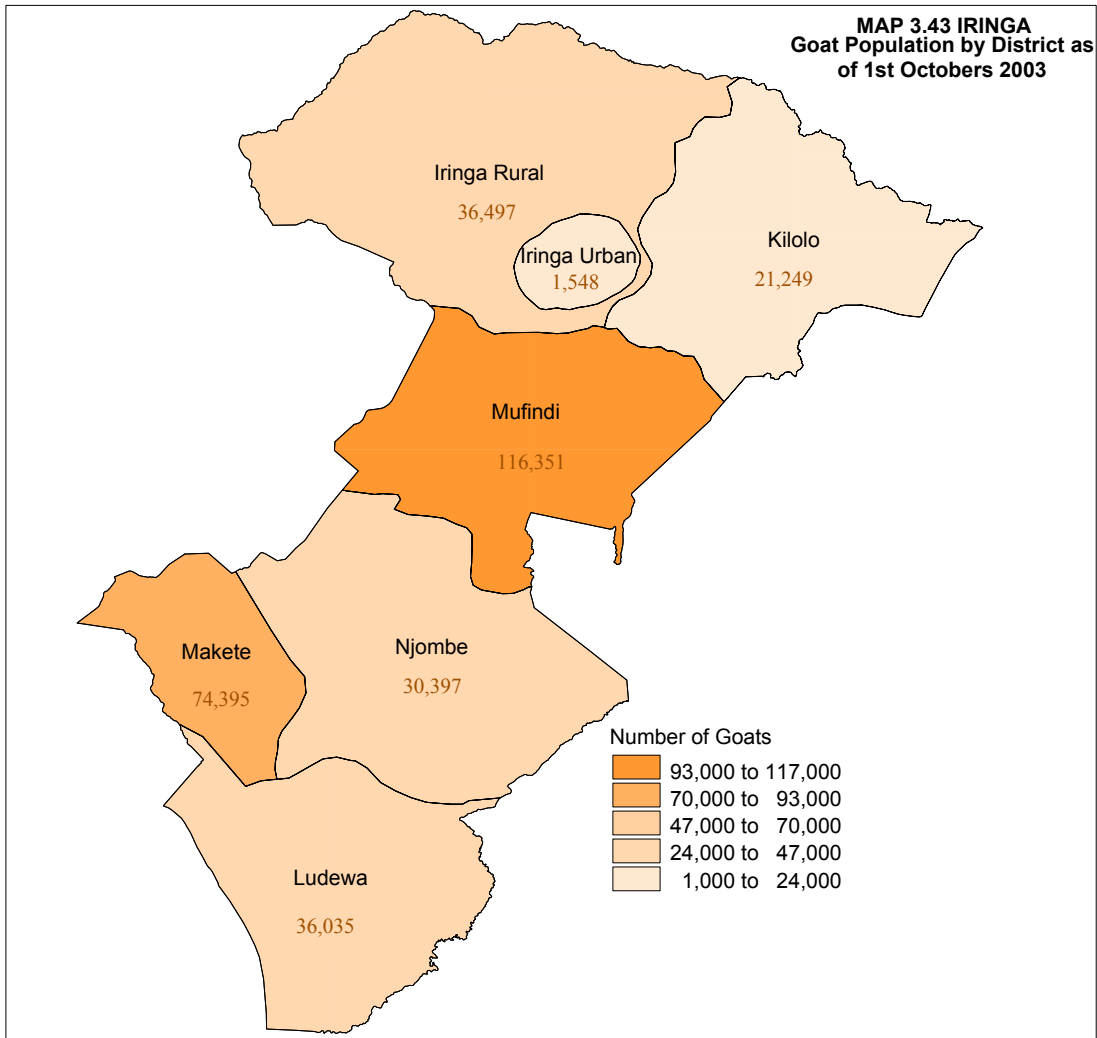
3.12.2.4 Goat Population Trend

The overall annual growth rate of goat population from 1995 to 2003 was 3.6 percent. This positive trend implies eight years of population increase from 246,543 in 1995 to 327,476 in 2003. The number of goats increased from 246,543 in 1995 to 327,587 in 1999, an annual increase of 7.4 percent but decreased from 327,586 in 1999 to 327,476 in 2003 representing an annual decrease of -0.01 percent (Chart 3.132).



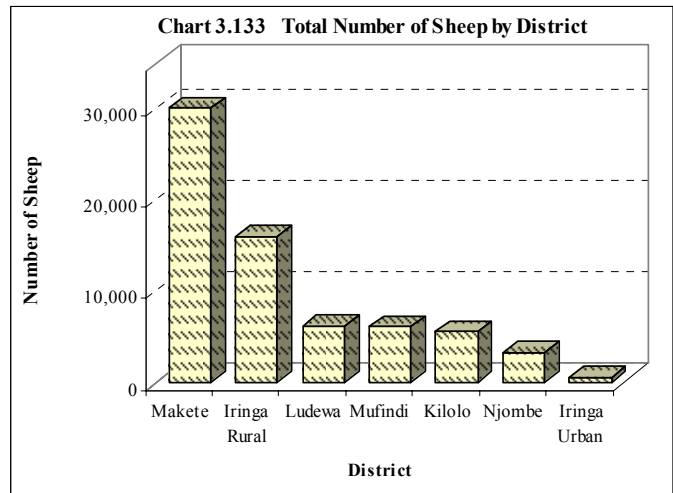
3.12.3. Sheep Production

Sheep rearing was the third most important livestock keeping activity in Iringa region after cattle and goats. The region ranked 10 out of 21 Mainland regions and had 1.7 percent of all sheep on Tanzania Mainland.



3.12.3.1 Sheep Population

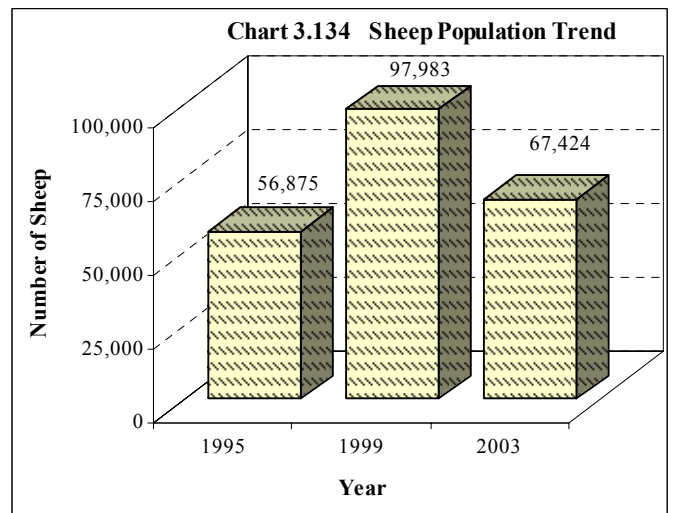
The number of sheep-rearing households was 11,716 (4% of all agricultural households in Iringa region) rearing 67,424 sheep, giving an average of 6 heads of sheep per sheep-rearing household. The district with the largest number of sheep was Makete with 30,018 sheep (45% of total sheep in Iringa region), followed by Iringa Rural (15,976 sheep, 24%), Ludewa (6,123 sheep, 9%), Mufindi (6,043 sheep, 9%), Kilolo (5,533 sheep, 8%), Njombe (3,268 sheep, 5%) and Iringa Urban (463 sheep, 1%) (Chart 3.133 & Maps 3.45 and 4,46).



Sheep rearing was dominated by indigenous breeds that constituted 97 percent of all sheep kept in the region. Only 3 percent of the total sheep in the region were improved breeds.

3.12.3.2 Sheep Population Trend

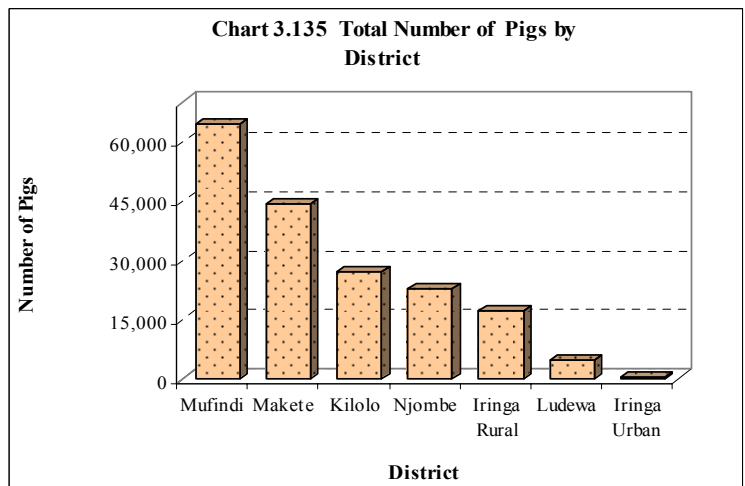
The overall annual growth rate of the sheep population over the eight year period from 1995 to 2003 was 2.15 percent. The population increased at an annual rate of 14.57 percent from 56,875 in 1995 to 97,983 in 1999. However, from 1999 to 2003, sheep population decreased at an annual rate of -8.92 percent (Chart 3.134).

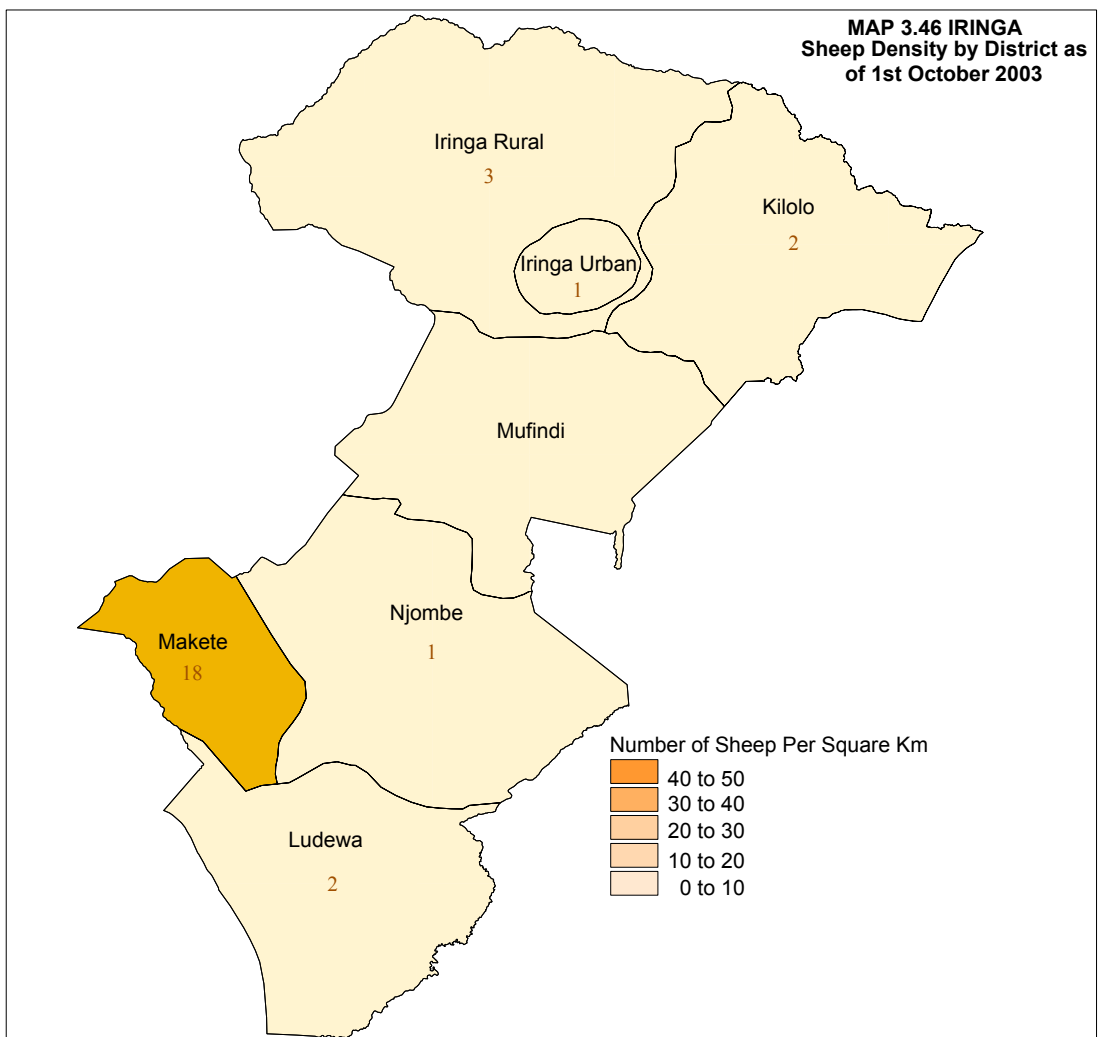
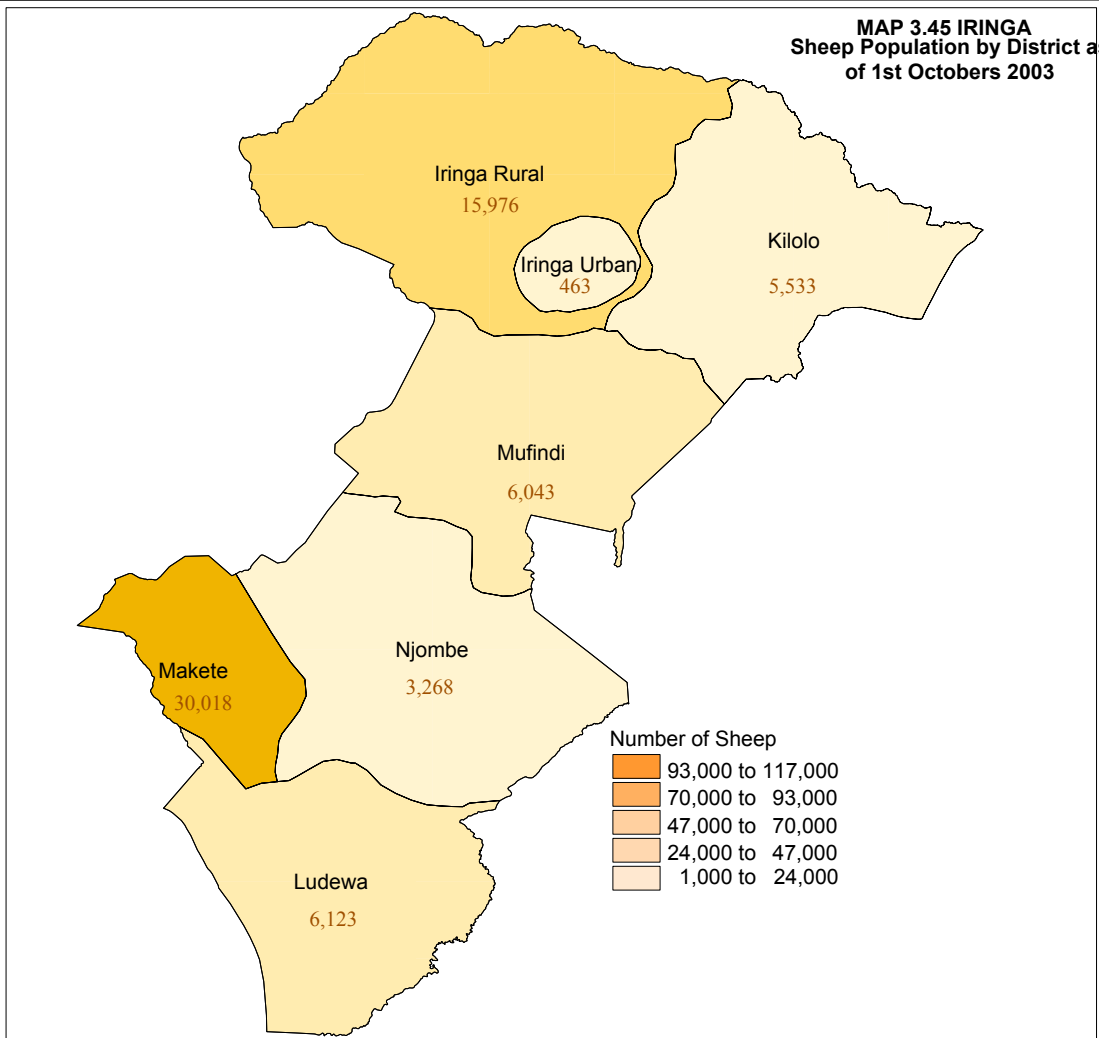


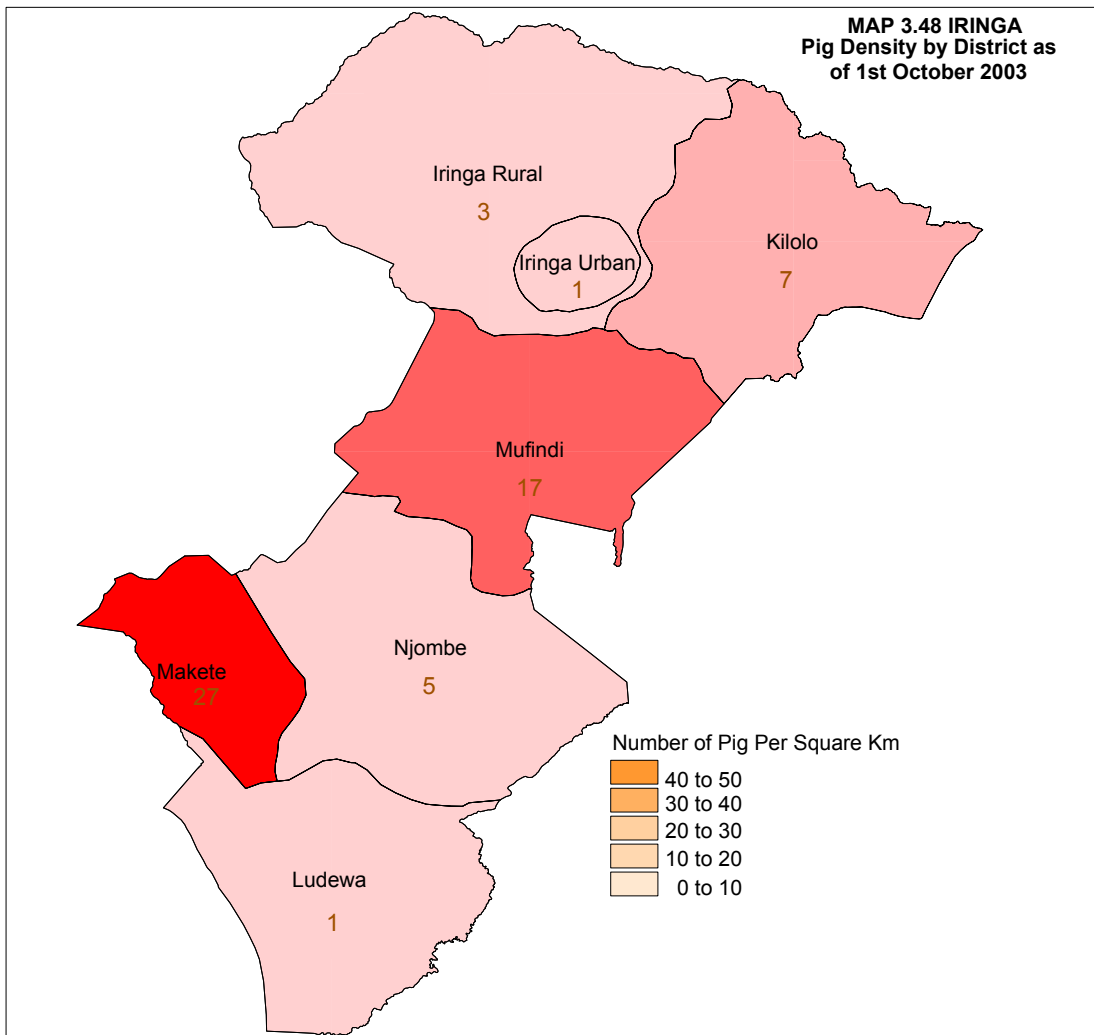
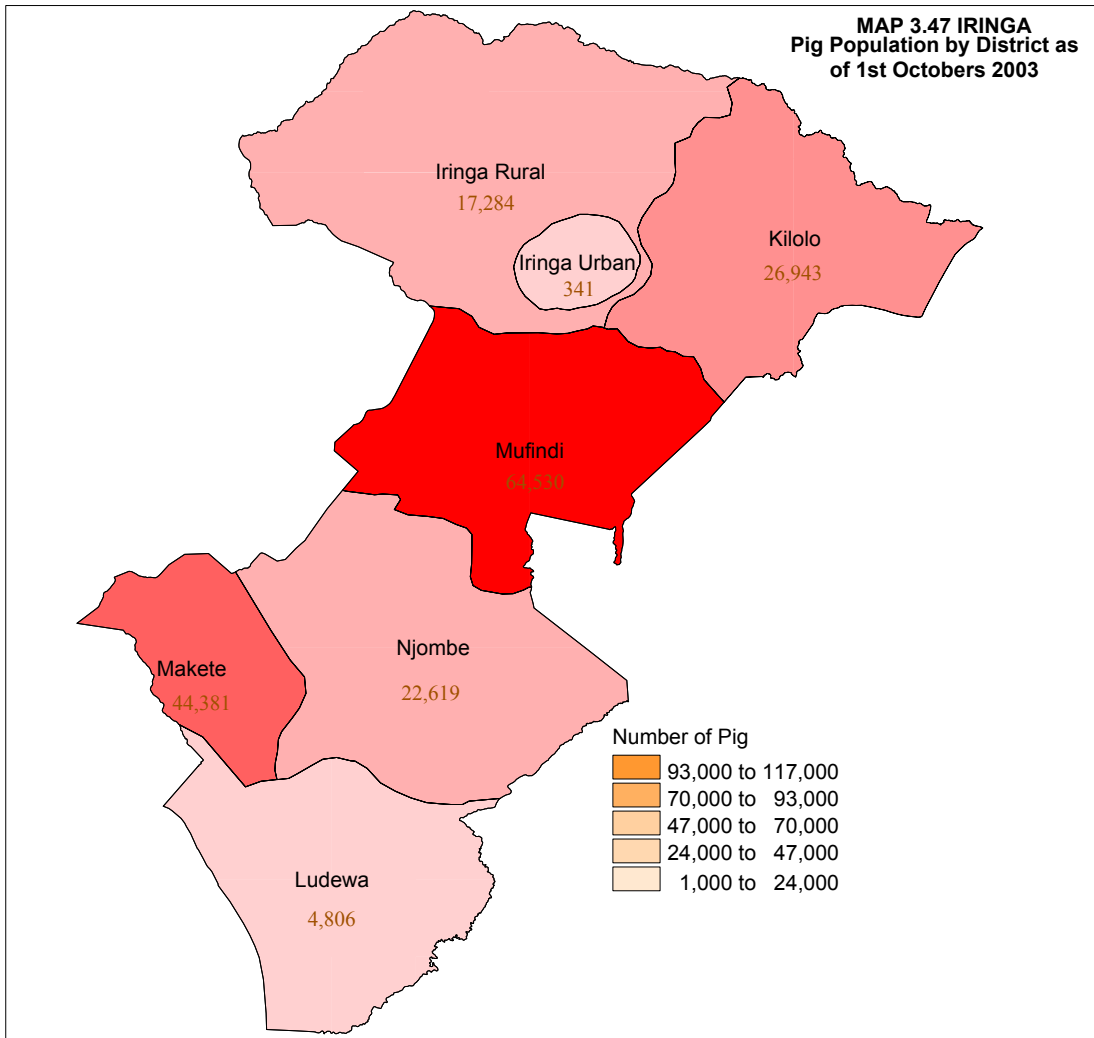
3.12.4 Pig Production

Pigs are the least important livestock keeping activity in the region after cattle, goats and sheep. However, the region ranks 2 out of 21 Mainland regions and has 16 percent of the total pigs on the Mainland.

The number of pig-rearing agricultural households in Iringa region was 67,979 (24.4% of the total agricultural households in the region) rearing 180,904 pigs. This gives an average of 3 pigs per pig-rearing household. The district with the largest number of pigs was Mufindi with 64,530 pigs (35.7% of the total pig population in the region), followed by Makete (44,381 pigs, 24.5%), Kilolo (26,943 pigs, 14.9%), Njombe (22,619 pigs, 12.5%), Iringa Rural (17,284 pigs, 9.6%), Ludewa (4,806 pigs, 2.7%) and Iringa Urban (341 pigs, 0.2%) (Chart 3.135 & Maps 3.47 and 3.48).

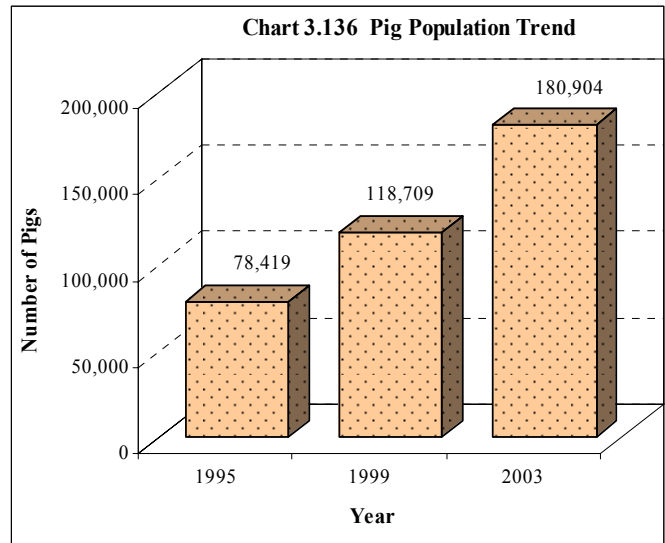






3.12.4.1 Pig Population Trend

The overall annual growth rate of the pig population for the eight years period from 1995 to 2003 was 11.01 percent. During this period the pig population grew from 78,419 in 1995 to 180,904 in 2003. The pig population increased from 78,419 in 1995 to 118,709 in 1999 at an annual rate of 10.9 percent. The growth rate increased to 11.1 percent during the following four years from 1999 to 2003 then it increased at a higher annual rate of 11.1 percent during the following four years from 1999 to 2003 in which pig population increased from 118,709 to 180,904(Chart 3.136).

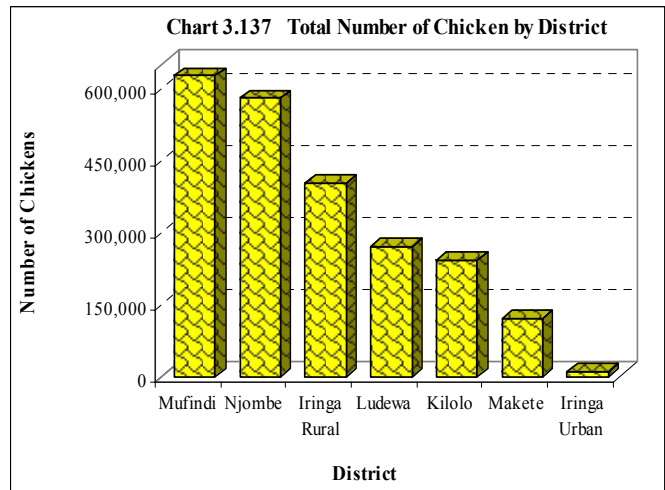


3.12.5 Chicken Production

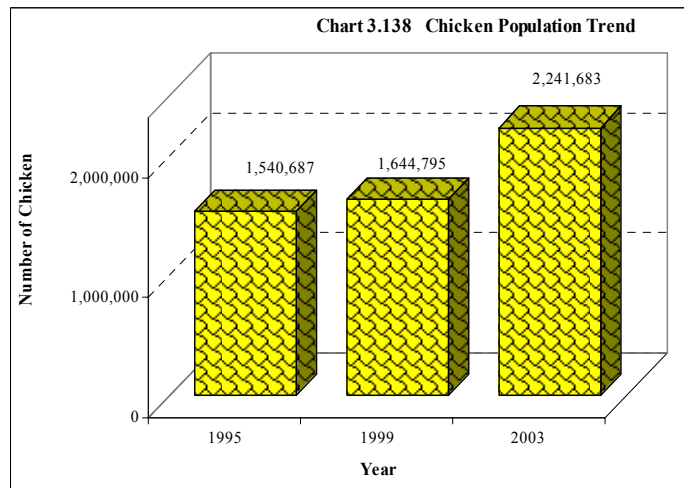
The poultry sector in Iringa region was dominated by chicken production. The region contributed 6.7 percent to the total chicken population on Tanzania Mainland.

3.12.5.1 Chicken Population

The number of households keeping chicken was 200,117, raising about 2,241,683 chickens. This gives an average of 11 chickens per chicken-rearing household. In terms of total number of chickens in the country, Iringa region ranked fifth out of the 21 Mainland regions.

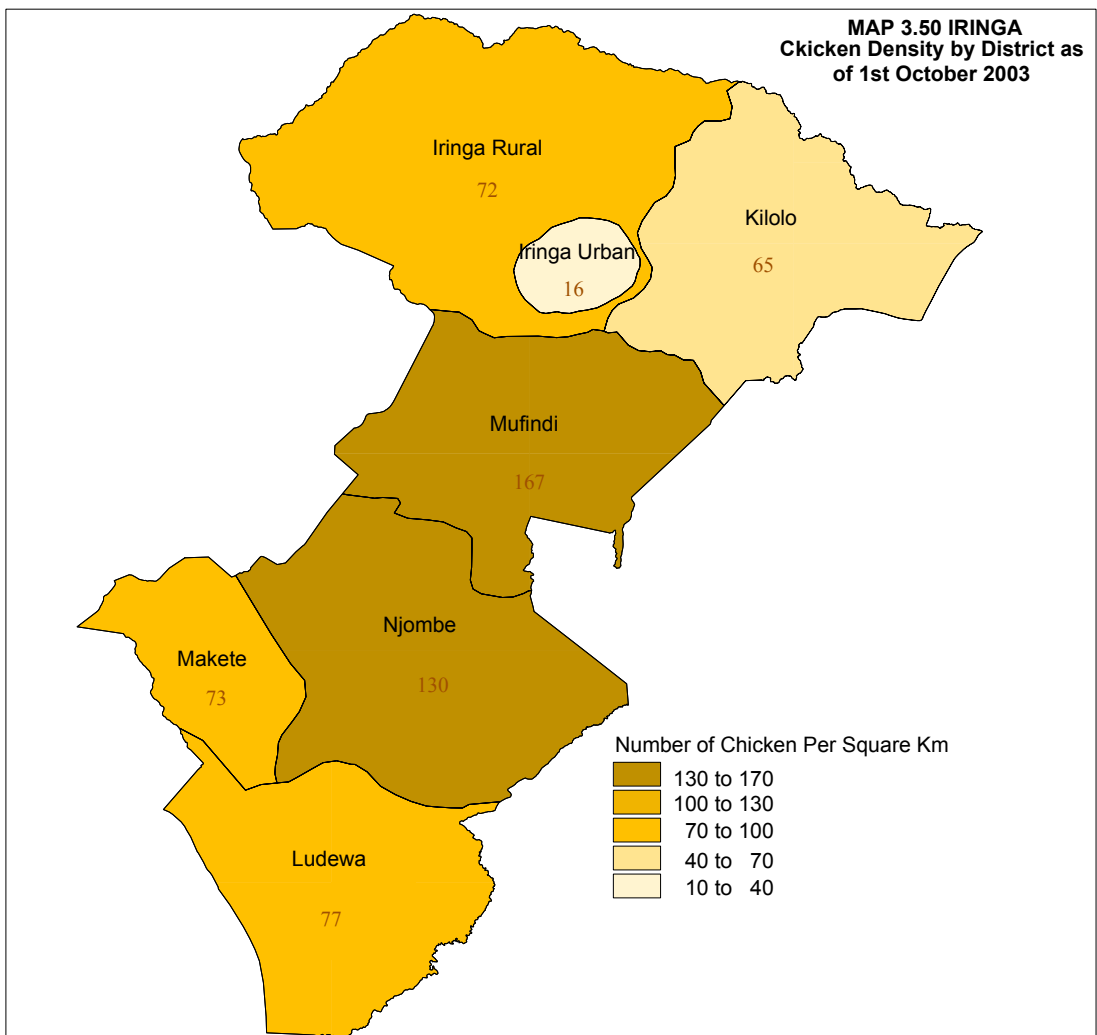
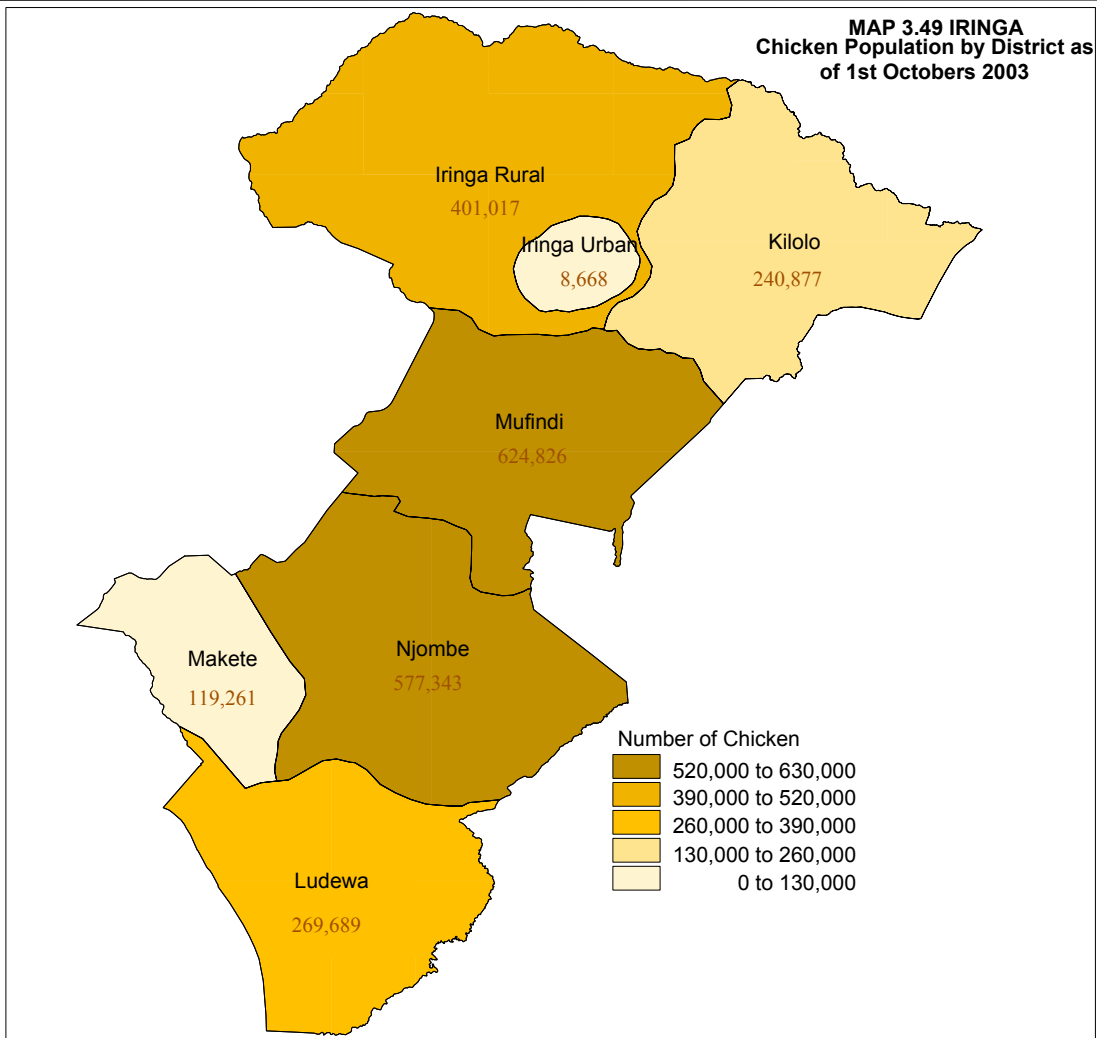


The district with largest number of chickens was Mufindi with 624,826 chickens (27.9% of the total chickens in the region), followed by Njombe (577,343 chickens, 25.8%), Iringa Rural (401,017 chickens, 17.9%), Ludewa (269,689 chickens, 12.0%), Kilolo (240,877 chickens, 10.7%), and Makete (119,261 chickens 5.3%). Iringa Urban had the least number of chickens (8,668 chickens, 0.4) (Chart 3.137 & Maps 3.49 and 3.50).



3.12.5.2 Chicken Population Trend

The overall annual chicken population growth rate during the eight-year period from 1995 to 2003 was 4.8 percent. Most of the increase occurred during the four year period from 1999 to 2003 when the chicken population increased from 1,644,795 to 2,241,683 (Chart 3.138).



occurred during the four year period from 1999 to 2003 when the chicken population increased from 1,644,795 to 2,241,683 (Chart 3.138).

Ninety one percent of all chicken in Iringa region were indigenous breeds. The dominance of indigenous breed makes the population trend for the indigenous chicken more-or-less the same as that of the total chickens in the region.

3.12.5.3 Chicken Flock Size

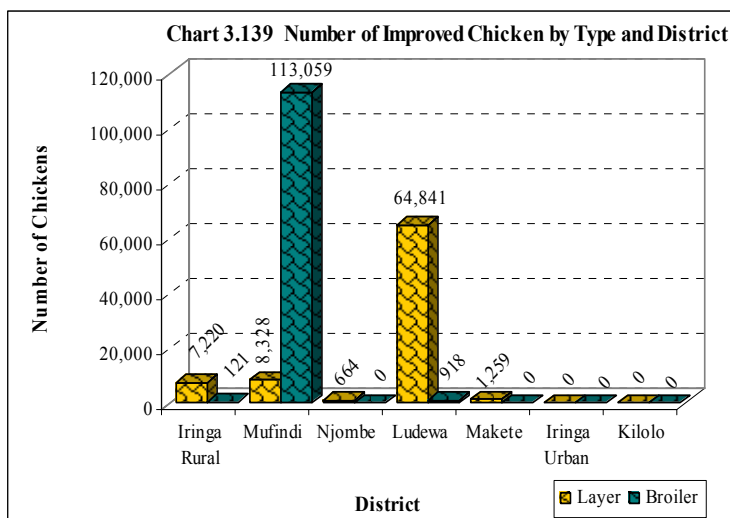
The results indicate that about 85 percent of all chicken-rearing households were keeping 1-19 chickens with an average of 6 chickens per household. About 15 percent of holders were reported to be keeping the flock size of 20 to 99 chickens with an average of 29 chickens per household.

Flock Size	Number of Households	%	Number of Chicken	Average Chicken by Households
1-4	49,897	37	136,130	2
5-9	65,178	27	420,914	6
10-19	58,979	21	752,508	13
20-29	17,014	9	379,348	22
30-39	5,191	3	164,368	32
40-49	1,540	2	62,731	42
50-99	2,066	2	138,068	61
100+	253	0	187,616	208
Total	200,117	100	2,241,683	10

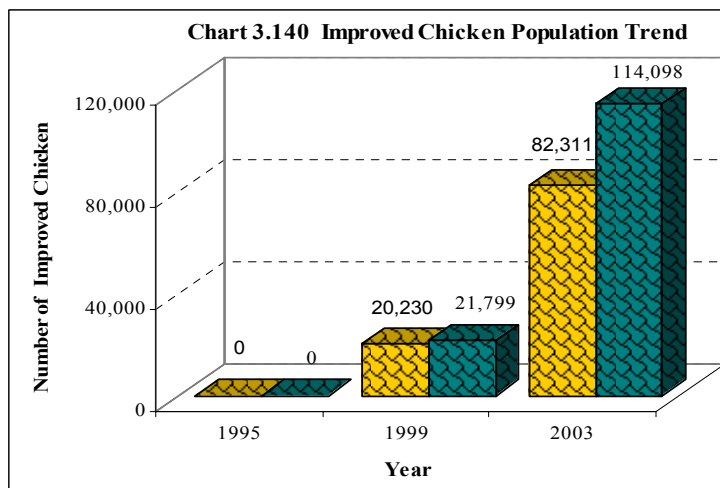
Only 0.13 percent of households kept flock sizes of more than 100 chickens at an average of 208 chickens per household (Table 3.13).

3.12.5.4 Improved Chickens (layers and broilers)

Layers chicken population in Iringa region increased at an annual rate of 42.03 percent for the period of four years from 20,230 in 1999 to 82,311 in 2003. The number of improved chicken was most significant in Mufindi District (61.8% of the total improved chicken in the region) followed by Ludewa (33.5%), Iringa Rural (3.7%), Makete (0.6%) and Njombe (0.3%) Iringa Urban District didn't report any improved chicken (Chart 3.139).



The overall annual growth rate for broilers during the eight-year period from 1995 to 2003 was 100 percent during which the population grew from 0 to 2,179. The annual growth rate was higher for the period of four years from 1999 to 2003 (169%). The broiler population exhibited an increased trend at the rate of 100 percent per annum for the period of four years from 1995 to 1999. Moreover, the annual rate increased from 1999 to 2003 was at a rate of 169 percent. The overall annual growth rate for broilers increased at annual rate of 100 during the eight-year period from 0 chickens in 1995 to 114,095 in 2003 (Chart 3.140).



3.12.6. Other Livestock

There were 82,093 ducks, 1,620 turkeys, 59,533 rabbits and 3,494 donkeys raised by rural agricultural households in Iringa region. Table 3-32 indicates the number of livestock kept in each district. The biggest number of ducks in the region was found in Ludewa district (63% of all ducks in the region), followed by Iringa Rural (19%), Mufindi (7%), Njombe and Kilolo (5% each) and Iringa Urban (1%). No ducks were reported in Makete district (Table 3.14).

3.12.7 Pest and Parasite Incidence and Control

The results indicate that 57 percent and 15 percent of the total livestock-keeping households reported to have encountered ticks and tsetse-fly problems respectively. Chart 3.141 shows that there is a predominance of tick related diseases over tsetse related diseases. Incidences of both problems were highest in Iringa Urban district but lowest in Iringa Rural (Map 3.51).

The most practiced method of tick controlling was spraying with 55 percent of all livestock-rearing households in the region using the method. Other methods used were dipping (9%), smearing (3%) and other traditional methods like hand picking (7%). However, 26 percent of livestock-keeping households did not use any method.

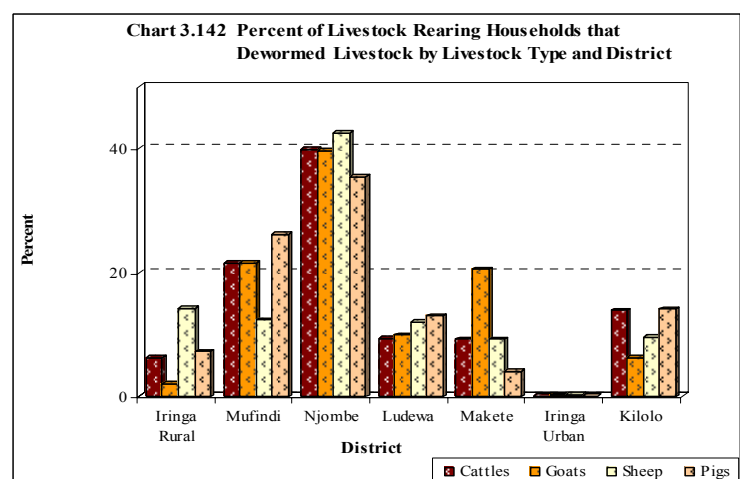
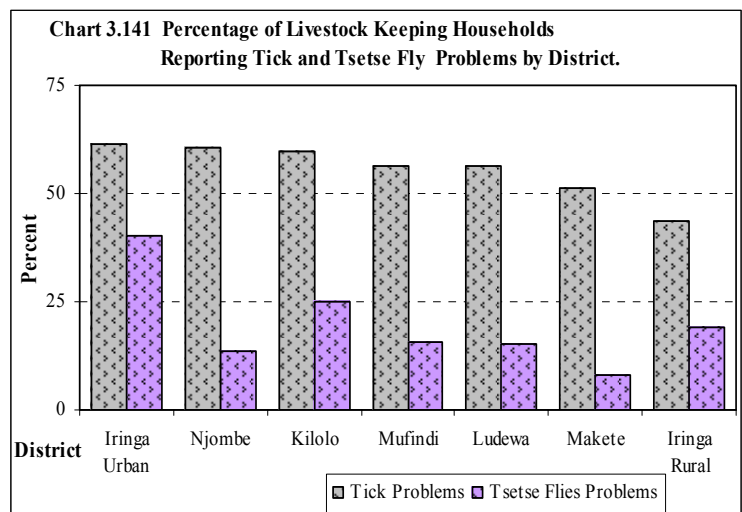
The most common method used to control tsetse flies was spraying which was practiced by 33 percent of livestock rearing households; this was followed by dipping (6%) and trapping (1%). However, 61 percent of the livestock rearing households did not use any of the three aforementioned methods.

3.12.7.1 De-worming

Livestock rearing households that de-wormed their animals were 41,594 (59% of the total livestock rearing households in the region). The percentage of the households that de-wormed cattle was 62 percent, goats (25%), sheep (9%) and pigs (50%) (Chart 3.142).

Table 3.14 Number of Other Livestock by Type of Livestock and District

District	Type of Livestock				
	Ducks	Turkeys	Rabbits	Donkeys	Other
Iringa Rural	15,620	235	10,178	1,092	0
Mufindi	5,970	714	23,622	255	53,367
Njombe	4,163	.0	13,280	239	64,142
Ludewa	51,469	61	7,962	0	0
Makete	0	0	1,389	1,908	33,885
Iringa Urban	489	0	128	0	0
Kilolo	4,383	610	2,974	0	4,138
Total	82,093	1,620	59,533	3,494	155,532

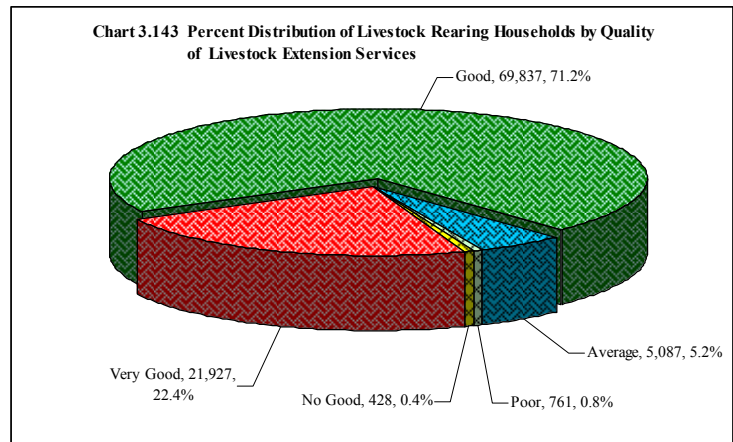


3.12.8. Access to Livestock Services

3.12.8.1 Access to Livestock Extension Services

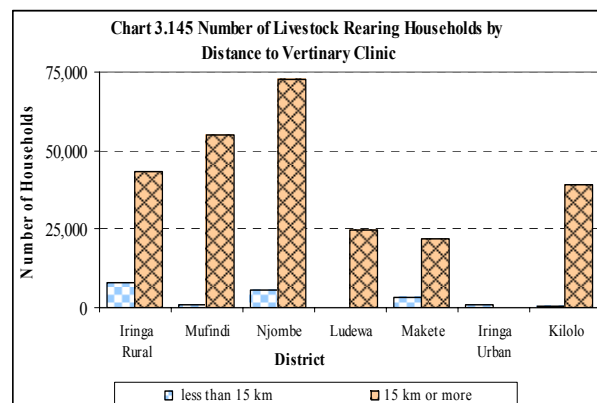
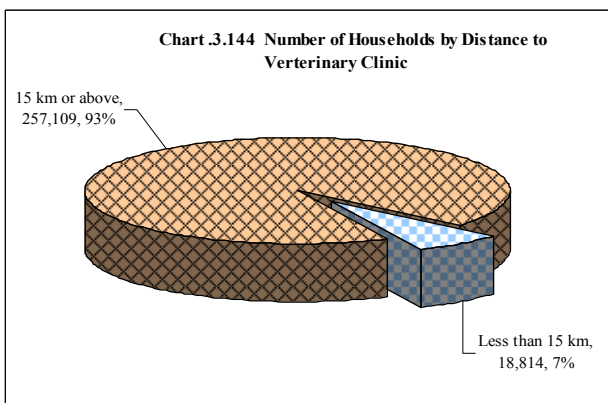
The total number of households that received livestock advice was 72,814, representing 62 percent of the total livestock-rearing households and 26 percent of the agricultural households in the region. The main livestock extension agent was the government which provided service to about 98.6 percent of all households receiving livestock extension services. The rest of the households got services from NGOs/development projects (1.1%) and large-scale farmers (0.3%).

About 71 percent of livestock rearing households described the general quality of livestock extension services as being good, 5 percent describe them as average and 22 percent said they were very good. However, 0.4 percent of the livestock rearing households said the quality was not good whilst 1 percent described them as poor (Chart 3.143).



3.12.8.2 Access to Veterinary Clinic

Many veterinary clinics were located very far from livestock rearing households. About 93 percent of the livestock rearing households accessed the services, at a distance of 15 km or more. Only 7 percent of them accessed the services within 14 kms from their dwellings (Chart 3.144).

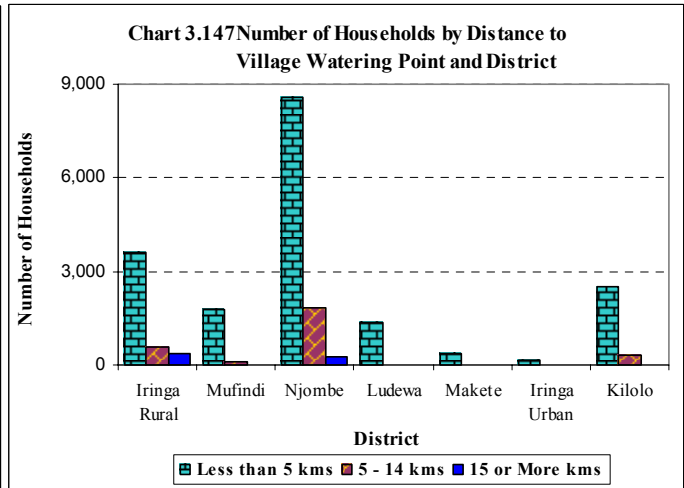
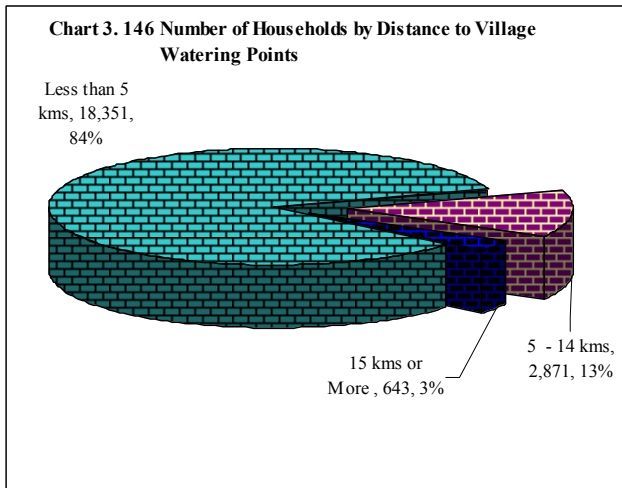


The most affected district was Ludewa district with almost all livestock rearing households accessing the services at a distance of 15 km or more. Iringa Urban district was the least affected because about 70 percent of the households could access the service within a distance of 14 kilometers (Chart 3.145).

3.12.8.3 Access to Village Watering Points/dam

Of the livestock rearing households reporting having access to village watering points/dams in Iringa region, 84 percent (18,351 households) reside less than 5 kilometers from the nearest watering point, whilst 13 percent (2,871 households) reside between 5 and 14 kilometers. However, 2 percent of the livestock rearing households (643 households) have to travel a distance of 15 kms or more to the nearest watering point (Chart 3.146).

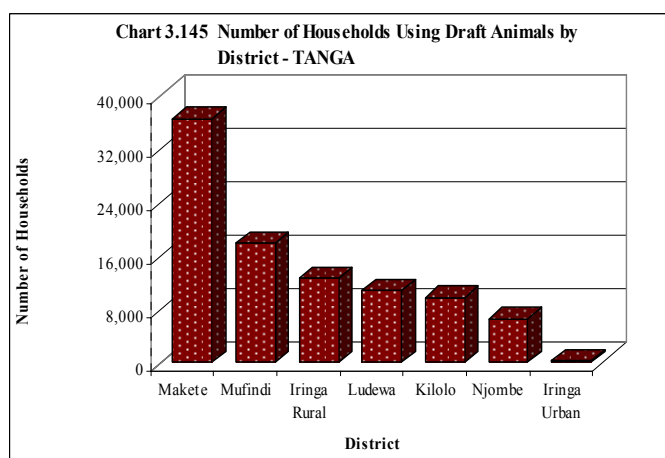
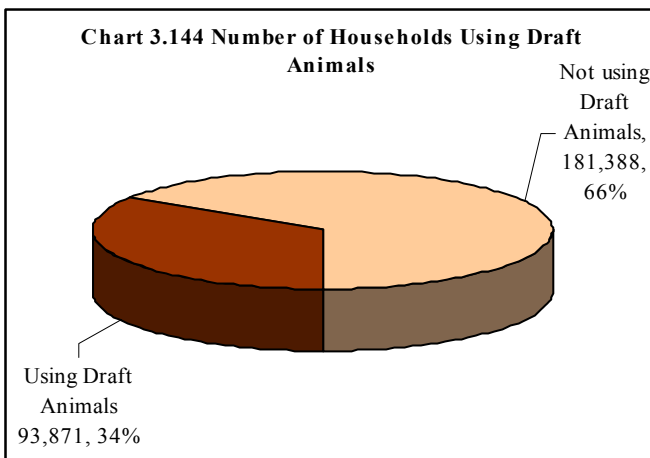
Ludewa and Makete districts had the best livestock water supply with all of livestock rearing households residing within 5 kilometers from the nearest watering point. This is followed by Mufindi, Iringa Urban, Njombe and Iringa Rural (79%) (Chart 3.147).



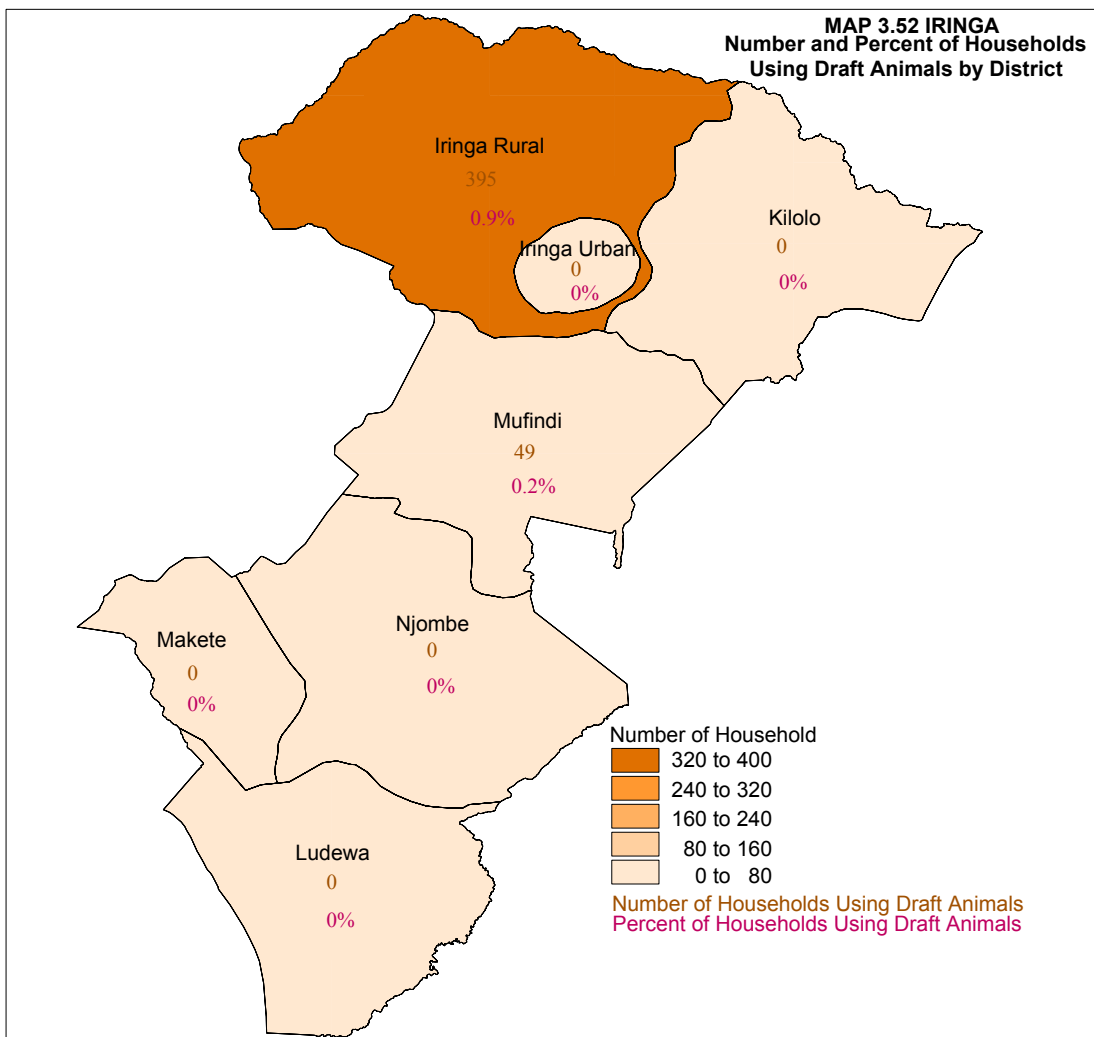
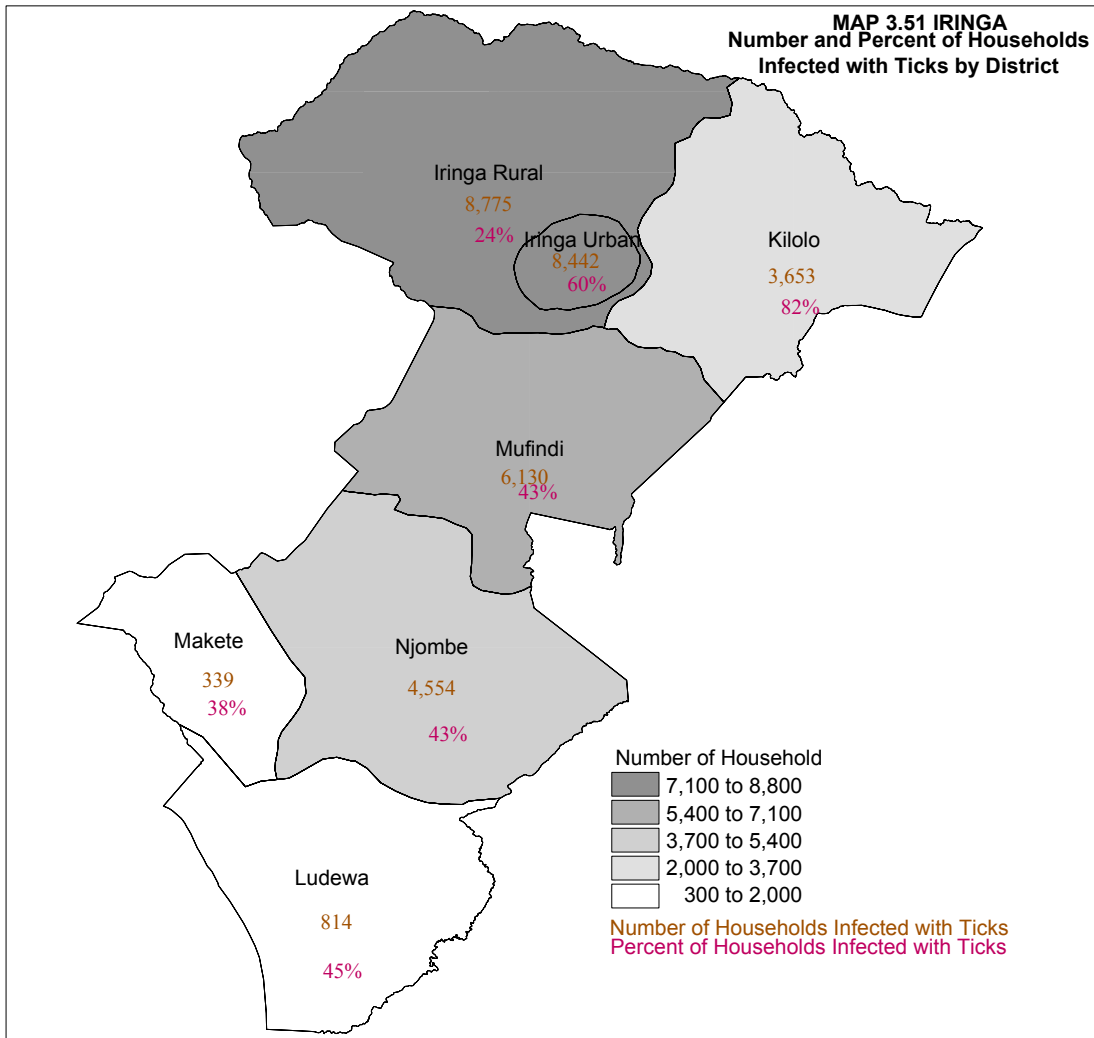
3.12.9. Animal Contribution to Crop Production

3.12.9.1 Use of Draft Power

Use of draft animals to cultivate land in Iringa region moderate with 81,105 households (31% of the total households in the region) using them (Chart 3.144). They were used in all seven districts of the region. The number of households that used draft animals in Makete was 39,300 representing 46 percent of the households using draught animals in the region. This was followed by Mufindi (19%), Kilolo (16%), Iringa Rural (12%) and Njombe (6%). Very few households in Iringa Urban used draft animals (Chart 3.145 and Map 3.52).

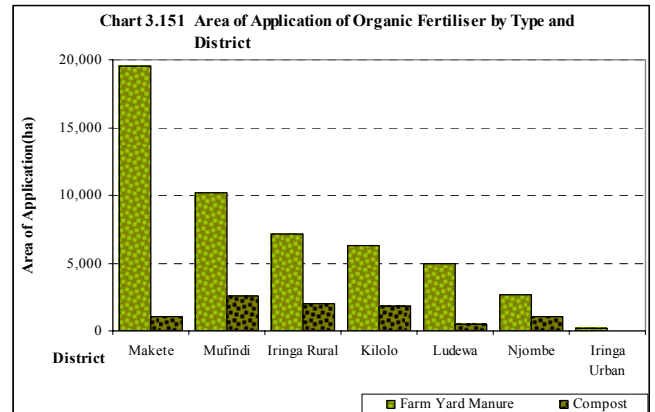
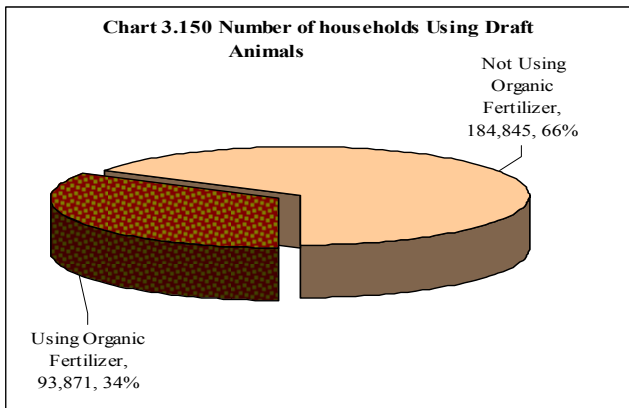


The region had 145,215 draft animals. Out of which 102,857 (71%) were Oxen, followed by Cows 24,432 (17%), Bulls 16,571 (11%) and Donkeys 1,355 (1%). The area cultivated by draft animal in the region was 132,118 hectares. The largest area cultivated using draft animals was found in Makete district (51,937 ha, 39.3% of the total area cultivated using oxen). This was followed by Kilolo (27,729 ha, 21%), Mufindi (27,596 ha, 20.9%), Iringa Rural (18,537 ha, 14%), Njombe (5,901 ha, 4.5%), Ludewa (332 ha, 0.3%) and Iringa Urban (87 ha, 0.1%).



3.12.9.2 Use of Farm Yard Manure

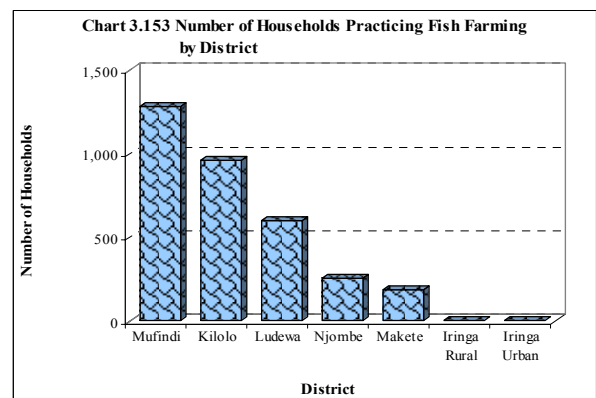
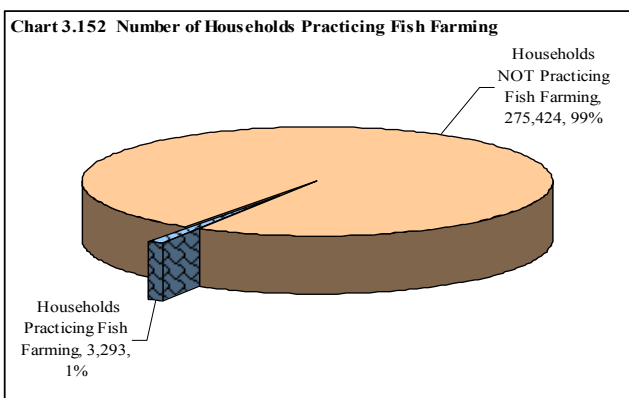
The number of households using organic fertilisers in Iringa region was 93,871 (33.7% of total crop growing households in the region) (Chart 3.150). The total area applied with organic fertilisers was 59,896 ha, of which 150,914 hectares (85% of the total area applied with organic fertiliser or 12.5 percent of the area planted with annual crops and vegetables in Iringa region during the wet season was applied with farm yard manure.



Only 8,982 ha (15% of the area of organic fertiliser application) was applied with compost. The largest area applied with farm yard manure was found in Makete district with (19,498 ha, 38% of the total area applied with farm yard manure), followed by Mufindi (10,146 ha, 19.9%), Iringa Rural (7,150 ha, 14%), Kilolo (6,315 ha, 12.4%), Ludewa (4,984 ha, 9.8%), Njombe (2,631 ha, 5.2%) and Iringa Urban (191 ha, 0.4%) (Chart 3.151 and Map 3.53 and 3.54).

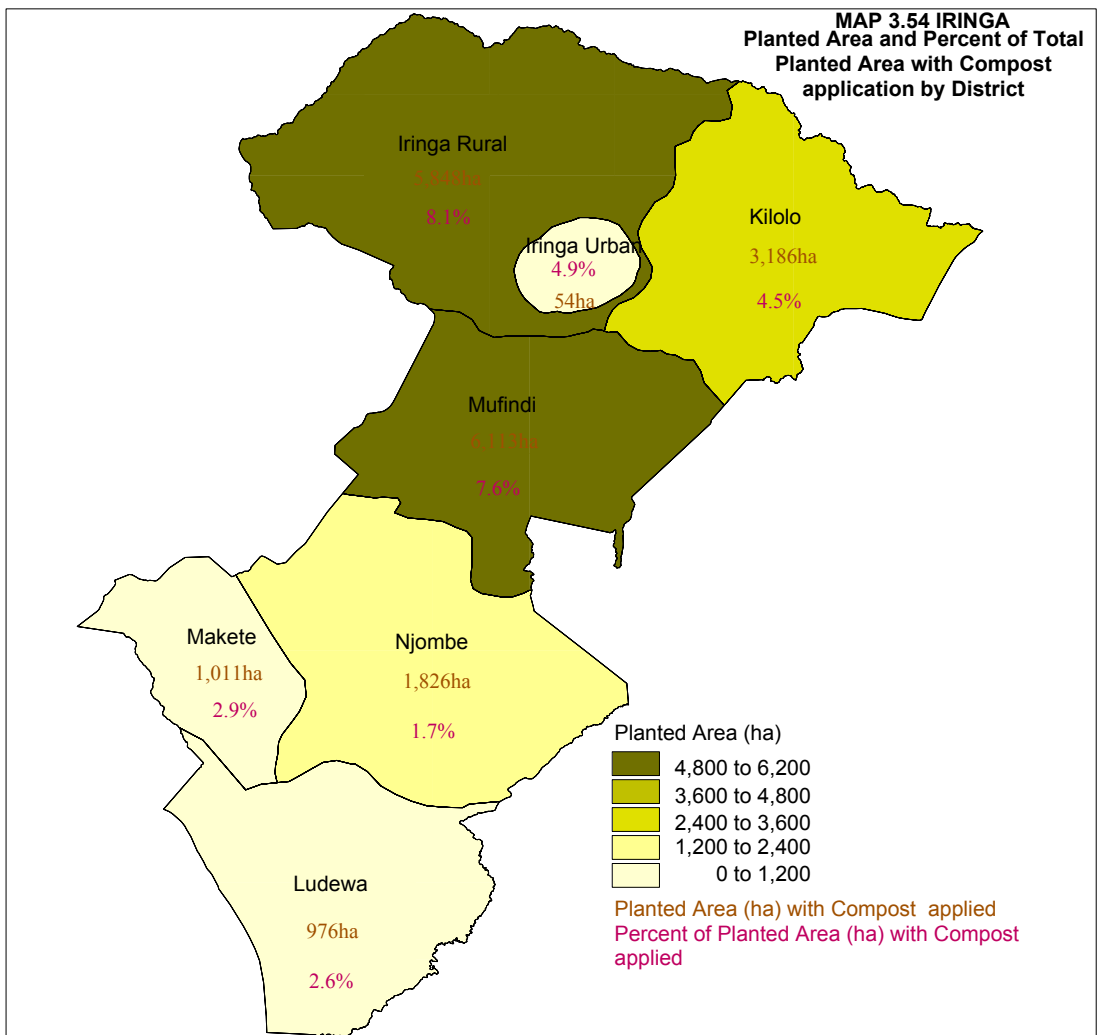
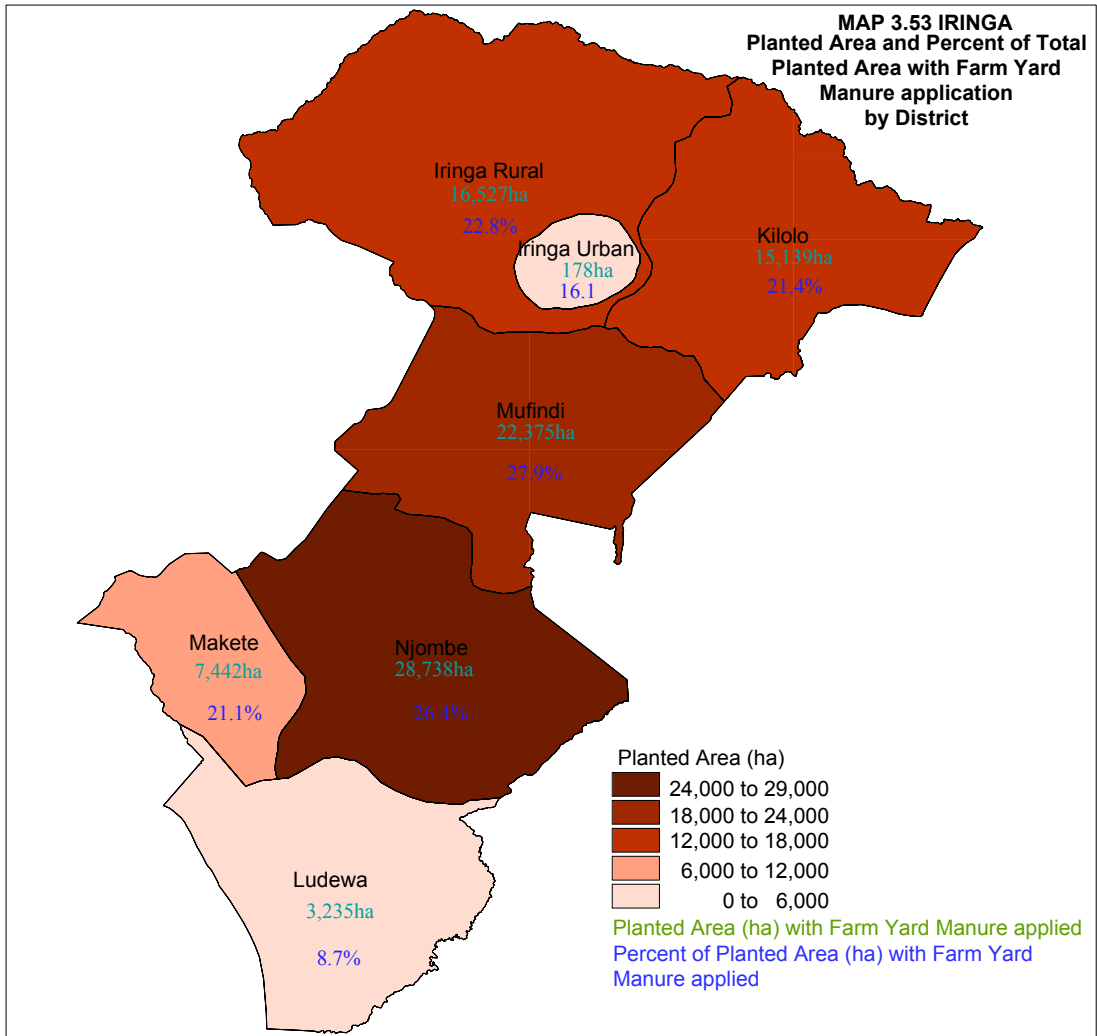
3.5.0 Fish Farming

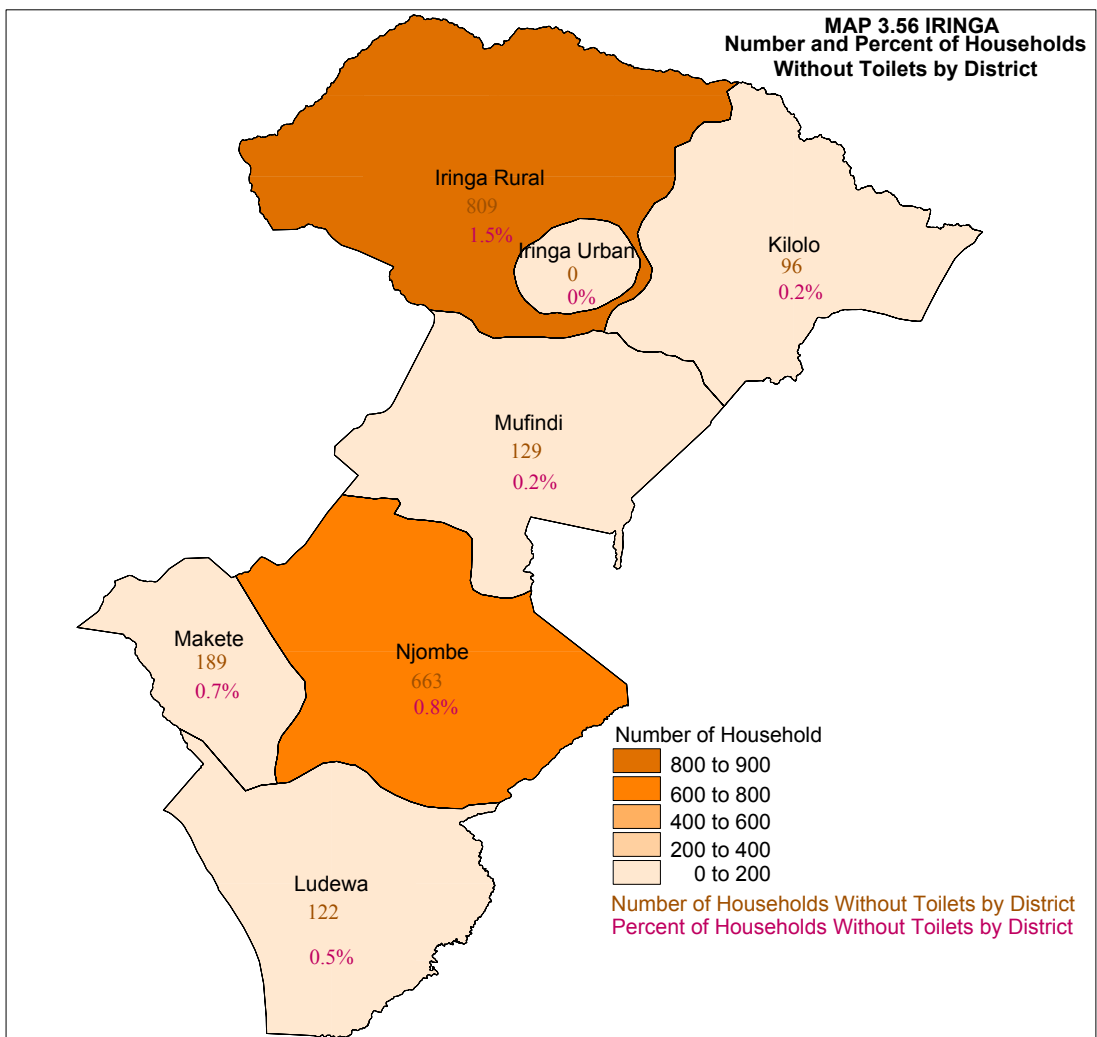
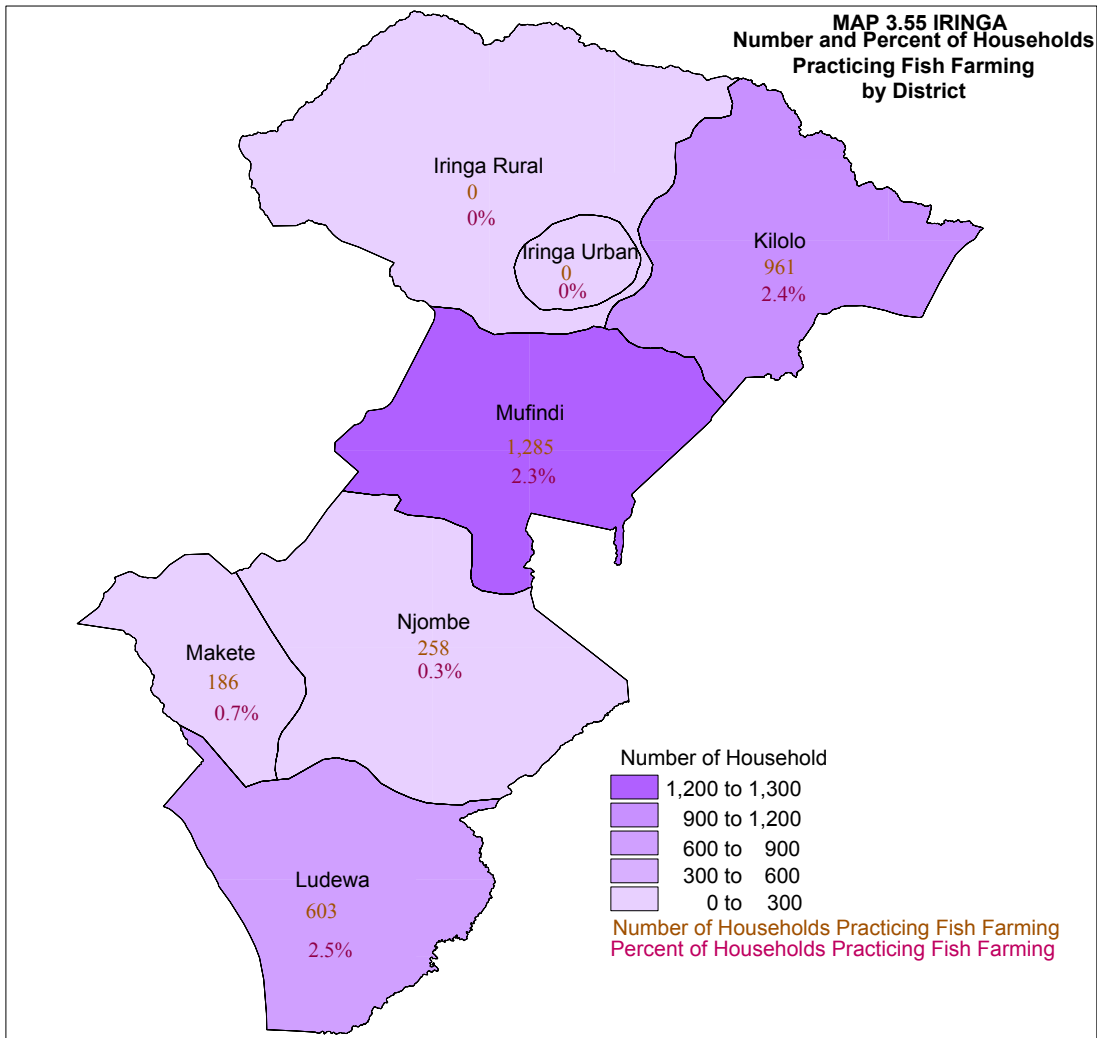
The number of households involved in fish farming in Iringa region was 3,293 representing 1.2 percent of the total agricultural households in Iringa region (Chart 3.152).



Mufindi was the leading district with 1,285 households (39% of agricultural households) involved in fish farming. This was followed by Kilolo (961 households, 29%), Ludewa (603 households, 18%), Njombe (258 households, 8%) and Makete (186 households, 6%). Fish farming was not practiced in Iringa Rural and Iringa Urban districts (Chart 3.153 & Map 3.55).

The main source of fingerlings was non governmental organizations and/or projects which provided fingerling to 48.5 percent of the fish farming households. About 29 percent of households practicing fish farming got fingerlings from neighbours, 15.3 percent got them from government institutions, 5.4 percent got them from private traders and 1.4 percent got fingerlings from other sources.





All fish farming households in the region used the dug-out-ponds as well as natural ponds and the main fish specie planted is tilapia. The number of fish harvested in Iringa region was 282,255, of which 249,513 fish (88.4%) were tilapia, 299 fish (0.1%) were carp and 32,443 fish (11.5%) were other species (Chart 3.154).

About 18.7 percent of the fish farming households sold their fish whilst 81 percent did not sell. Most of the fish were sold to their neighbours.

3.6.0 Access to Infrastructure and Other Services

The results indicate that among the evaluated services, regional capital was a service located very far from most of the household's dwellings than any other service. It was located at an average distance of 170 kilometers from the agricultural household's dwellings. Other services and their respective average distances in kilometers from the dwellings were tertiary market (50km),

tarmac road and Hospital (45km) each of them, secondary market (27km), secondary school (17km), primary market (16km), health clinic (8km), all weather road (5km), primary school (3 km) and feeder road (2 km) (Table 3.15).

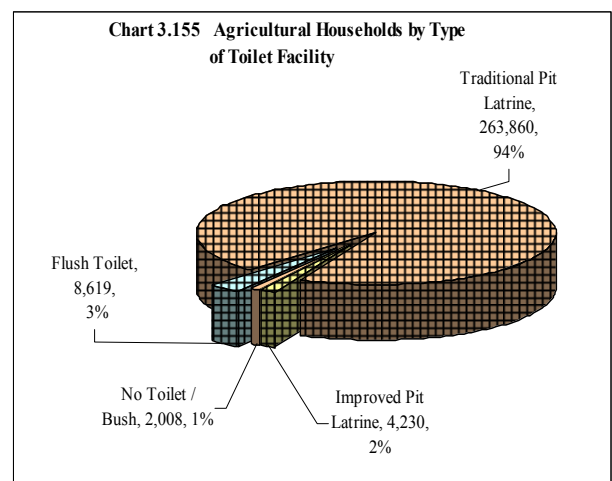
District	Mean Distance to										
	Secondary Schools	Primary Schools	All weather roads	Feeder Roads	Hospitals	Health Clinics	Regional Capital	Primary Markets	Secondary Market	Tertiary Market	Tarmac Roads
Iringa Rural	17.7	2.8	4.6	1.2	44.5	8.9	48.9	12.5	14.35	44.3	33.6
Mufindi	19.2	3.4	6.5	1.0	54.6	7.7	124.1	10.9	21.01	49.4	42.2
Njombe	12.6	3.2	2.9	1.2	42.0	8.3	236.4	17.0	35.67	36.3	25.6
Ludewa	20.4	1.9	6.1	3.1	30.9	5.1	349.6	28.7	58.56	61.9	116.4
Makete	17.8	1.8	4.8	2.5	25.4	7.0	314.3	17.5	35.26	39.4	78.0
Iringa Urban	6.4	1.4	7.7	1.7	11.1	5.8	13.7	13.8	24.32	8.1	14.1
Kilolo	20.3	2.6	8.1	3.2	63.3	9.9	65.2	16.4	12.11	89.5	41.4
Total	17.1	2.8	5.2	1.7	45.4	8.1	169.8	15.9	27.24	50.4	45.4

3.7. POVERTY INDICATORS

The agricultural aimed at getting information that would give an indication of the level of poverty in the rural areas of Tanzania. The information will also be used as a base for tracking progress in poverty reduction strategies undertaken by the government.

3.7.1 Type of Toilets

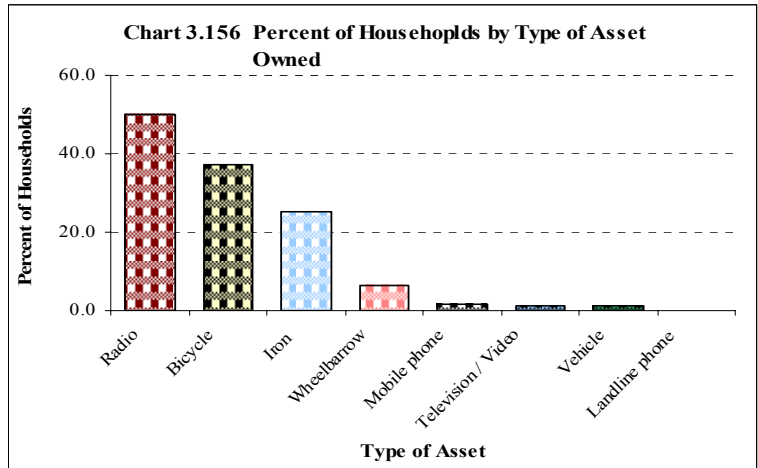
A large number of rural agricultural households in Iringa region use traditional pit latrines (263,860 households, 94% of all rural agricultural households), 8,619 households (3%) use flush toilet and 4,230 households (2%) use improved pit latrines. The remaining 2,008 households (1%) have no toilet facilities (Chart 3.155).



The distribution of the households without toilets within the region indicates that 40.3 percent of them were found in Iringa Rural district and 33 percent were from Njombe. The percentages of households without toilets in other districts were as follows Makete (9.4%), Mufindi (6.4%), Ludewa (6.1%), Kilolo (4.8). However, all households in Iringa Urban district had toilets (Map 3.56).

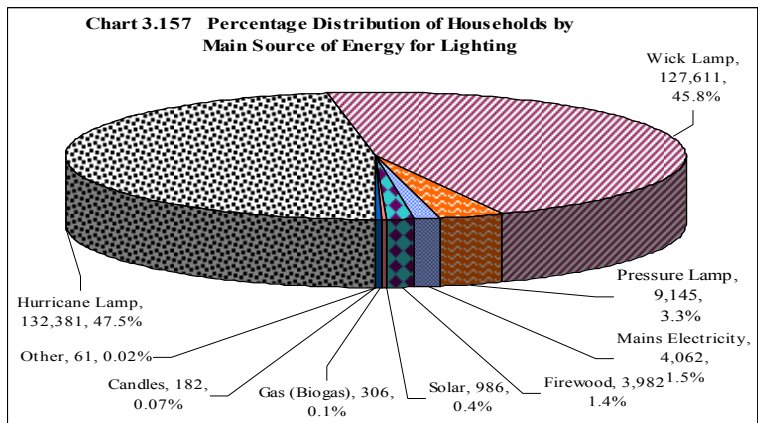
3.7.2 Household's Assets

Radios are owned by most rural agricultural households in Iringa region with 138,974 households (49.9% of the agriculture households in the region), followed by bicycle (103,799 households, 37.2%), iron (70,613 households, 25.3%), wheelbarrow (17,868 households, 6.41%), mobile phone (4,823 households, 1.73%), television/video (3,288 households, 1.18%), vehicle (2,835 households, 1.02%) and landline phone (182 households, 0.07%) (Chart 3.156).



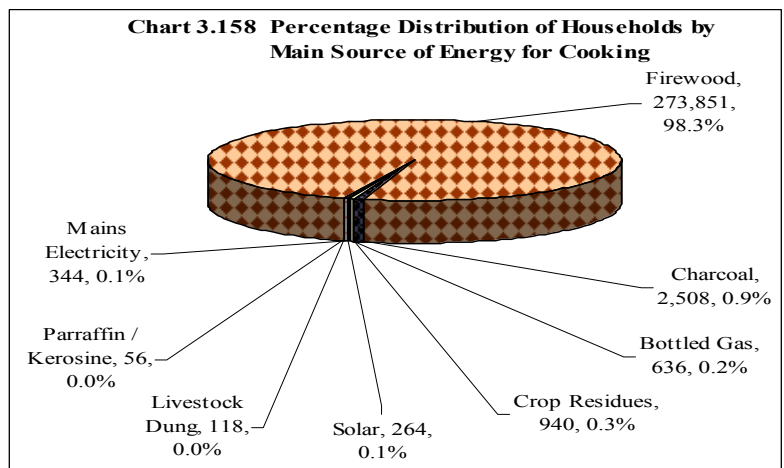
3.7.2 Sources of Lighting Energy

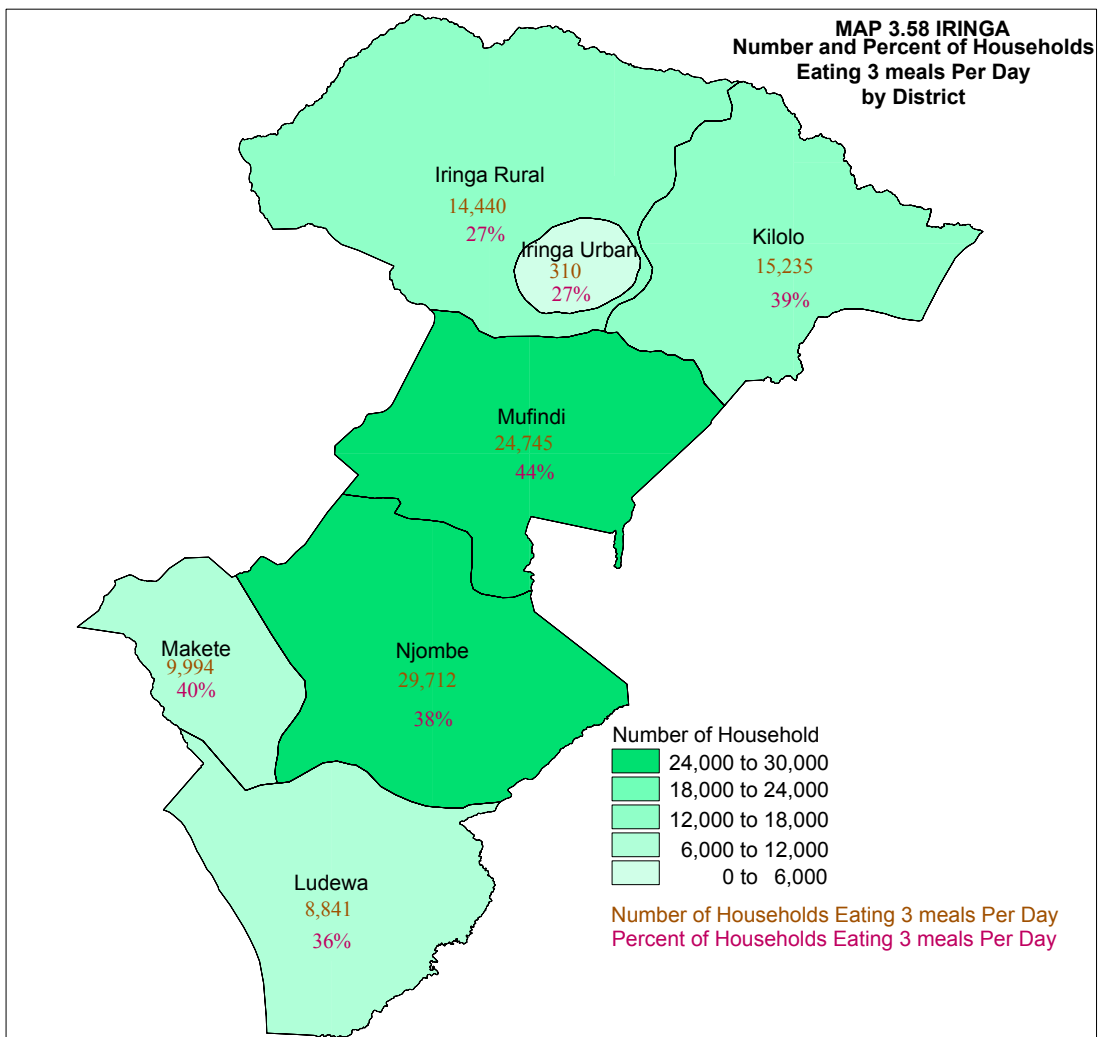
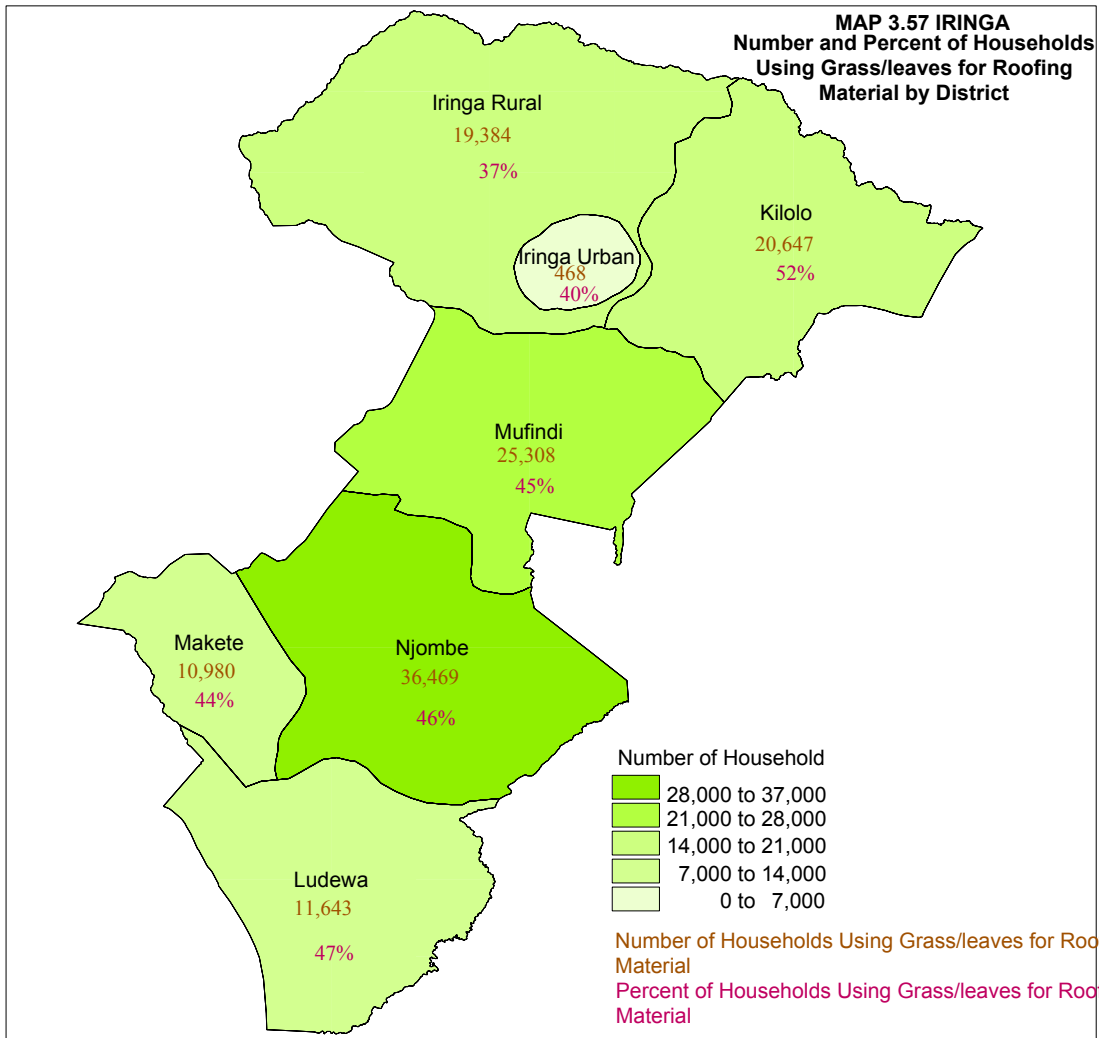
Hurricane lamp is the most common source of lighting energy in the region. with 47.5 percent of the total rural households using this source of energy, followed by wick lamp (45.8%), pressure lamp (3.3%), mains electricity (1.5%), firewood (1.4%), solar (0.4%), gas or biogas and candle (0.1% each) and "Other" (0.02%) (Chart 3.157).



3.7.4 Sources of Energy for Cooking

The most prevalent source of energy for cooking was firewood, which was used by 99 percent of all rural agricultural households in Iringa region. This is followed by charcoal (1%). The rest of energy sources accounted for 0.84 percent. These were crop residues (0.34%), bottled gas (0.21%), mains electricity (0.12%), solar (0.09%) and livestock dung (0.04%) (Chart 3.158).

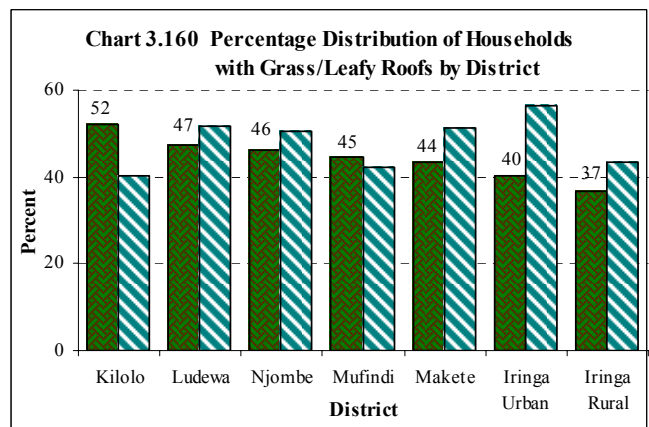
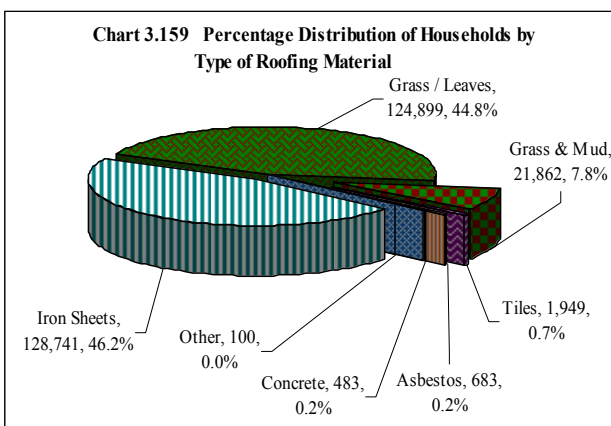




3.7.5 Roofing Materials

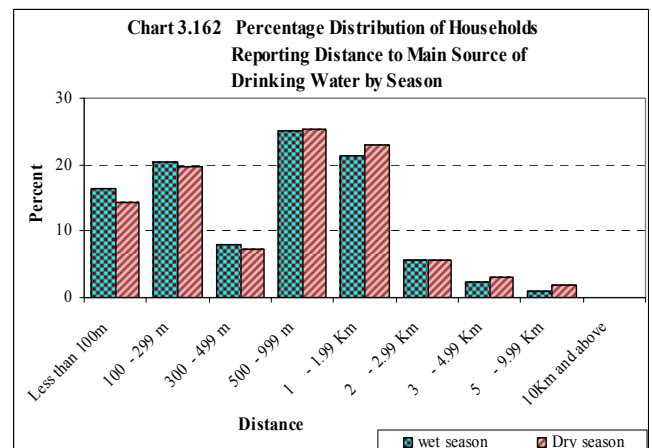
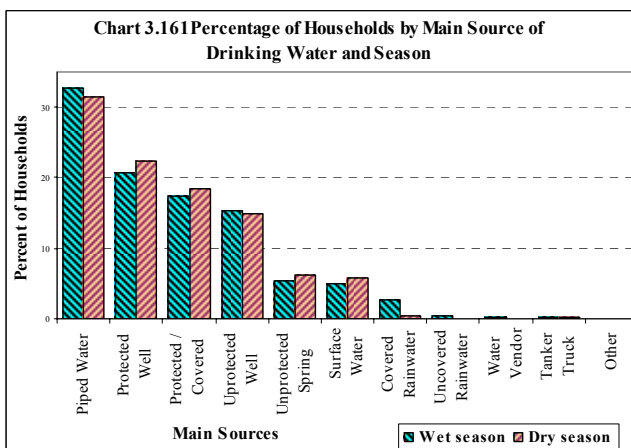
The most common material used for roofing of the main dwelling was iron sheets and it was used by 46.2 percent of the rural agricultural households in the region. This was closely followed by grass/leaves (44.8%), grass/mud (7.8%), tiles (0.7%), asbestos (0.2%), concrete (0.2%) and others (0.2%) (Chart 3.159).

Iringa Urban district had the highest percentage of households whose roofing material for the main building was iron sheets (56%) and was followed by Ludewa district.(52%), Njombe (51.5%), Makete (50.5%), Iringa Rural (43%), Mufindi (42%) and Kilolo (40%). On the other hand, Kilolo district had the highest percentage of households whose roofing material for the main building was grass/leaves (52%), followed by Ludewa district.(47%), Njombe (51.5%), Njombe (46%), Mufindi (45%) Makete (44%), Iringa Urban (40%) and Iringa Rural (37%) (Chart 3.160 and 3.56).



3.7.6 Access to Drinking Water

The main source of drinking water for rural agricultural households in Iringa region was pipe water with 33 percent of households using it as the main source during the wet season and 32 percent of the households during the dry seasons. This is followed by unprotected well (21% of households during the wet season and 22% in the dry season), protected spring (17% of households during the wet season and 18% in the dry season), unprotected spring (15% of households using it in each season) surface water (5% of households in the wet season and 6% during dry season), covered rain water catchment (5 percent of households using the source of water in wet season and 6 percent in dry season) and uncovered rain water catchment with 3 percent of households using it during the wet season. Other sources of water are used by a very small number of households Chart 3.161).

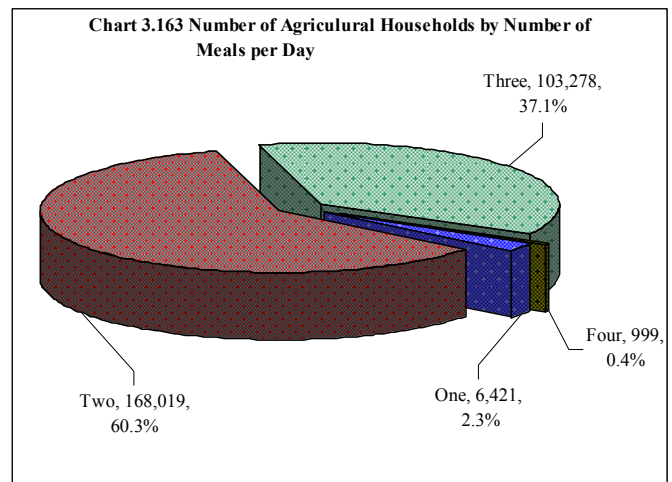


About 70 percent of the rural agricultural households in Iringa region obtained drinking water within a distance of less than one kilometer in the wet season compared to 66 percent of the households during the dry season. However, 30 percent of the agricultural households obtained drinking water from a distance of one or more kilometers during wet compared to 34 percent of households in the dry season (Chart 3.162).

3.7.7 Food Consumption Patterns

3.7.7.1 Number of Meals per Day

The majority of households in Iringa region normally have 2 meals per day (168,019 households, 60 percent of the households in the region). This is followed by those having 3 meals per day (37%) and 1 meal per day (2%). Only 0.04 percent of the households have 4 meals per day (Chart 3.163).



Iringa Rural district had the largest percent of households eating one meal per day whilst Mufindi had the highest percent of households eating 3 meals per day. (Table 3.16 and Map 3.57).

Chart 3.16 Number of Households by Number of Meals the Household Normally Takes per Day

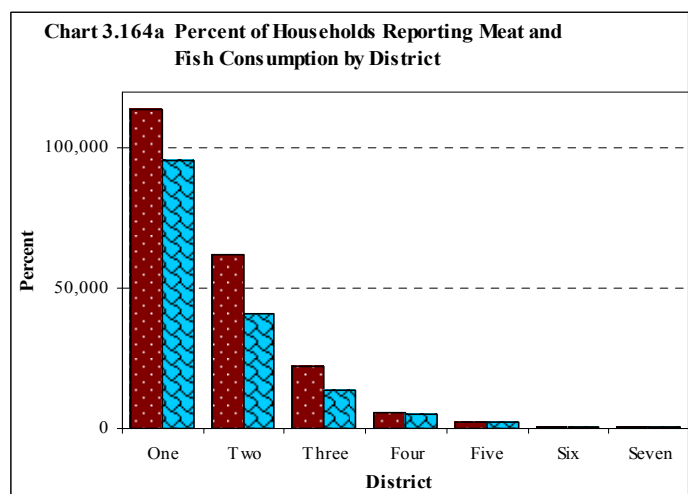
District	One	%	Two	%	Three	%	Four	%	Total
Iringa Rural	3,403	6.5	34,053	64.6	14,440	27.4	818	0.2	86,580
Mufindi	386	0.7	31,635	55.7	24,745	43.6	0	0.0	56,766
Njombe	918	1.2	48,022	61.0	29,712	37.7	119	0.2	78,772
Ludewa	1,017	4.1	14,669	59.8	8,841	36.0	0	0.0	24,527
Makete	185	0.7	14,987	59.4	9,994	39.6	62	0.2	25,227
Iringa Urban	25	2.1	828	71.2	310	26.7	0	0.0	1,162
Kilolo	488	1.2	23,827	60.2	15,235	38.5	0	0.0	39,549
Total	6,421	2.3	168,019	60.3	103,278	37.1	999	0.4	278,717

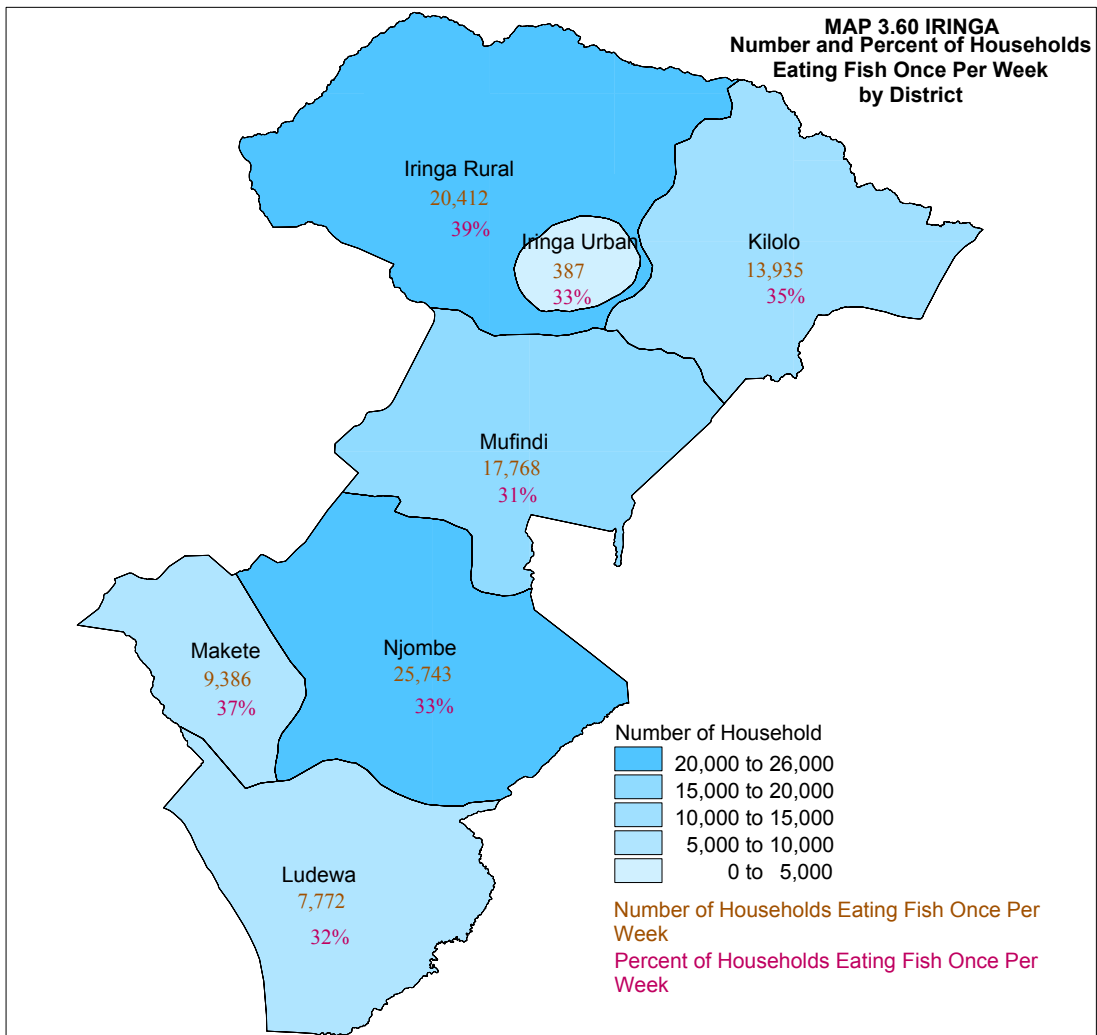
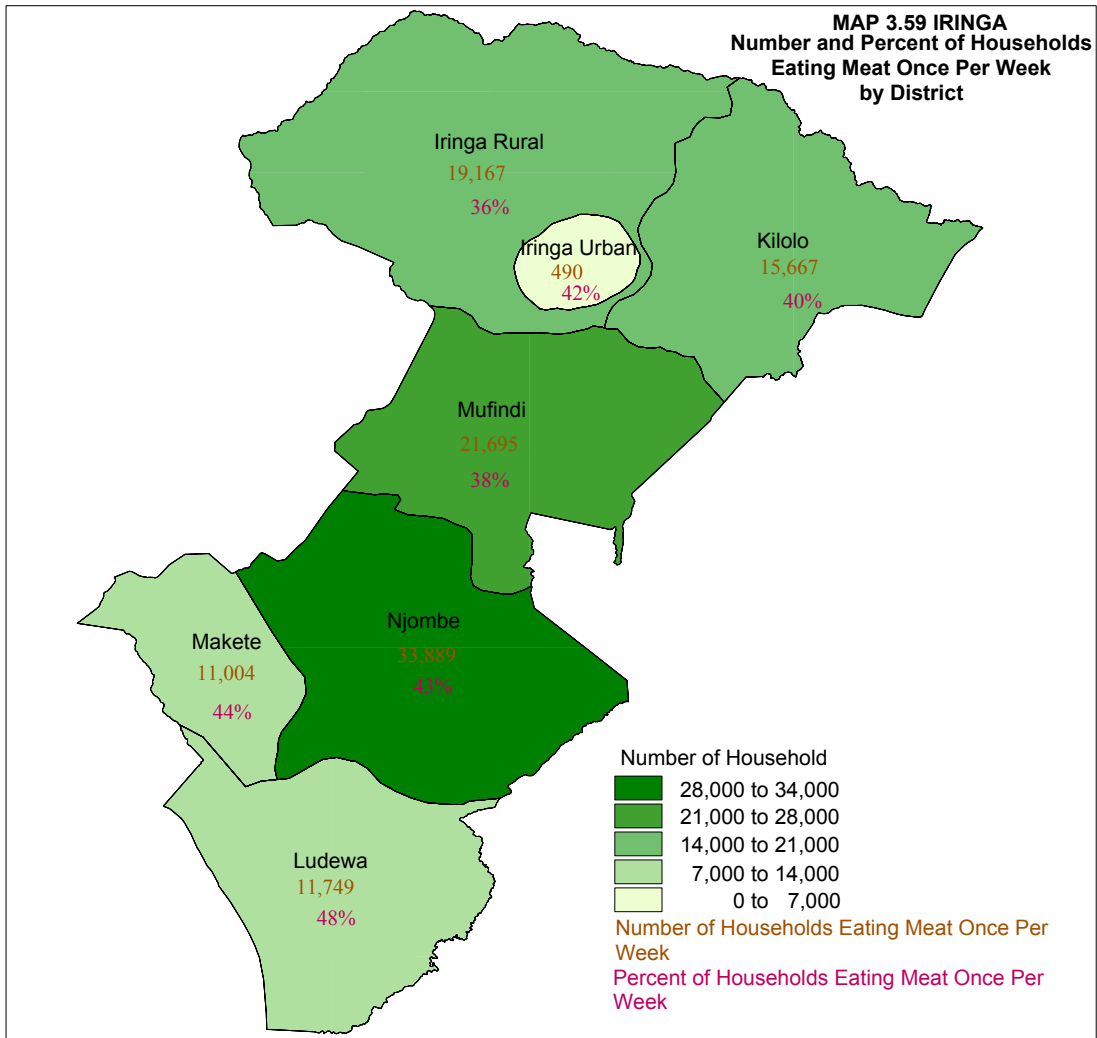
3.7.7.2 Meat Consumption Frequencies

The number of agricultural households in Iringa region that consumed meat during the week preceding the census was 206,621 (74% of the total agricultural household in the region) with 113,662 households (55% of those who consumed meat) consuming meat only once during the respective week. This was followed by those who had meat twice (30%). Very few households had meat three or more times during the respective week. About 25.9 percent of the agricultural households in Iringa region did not eat meat during the week preceding the census (Chart 3.164).

3.7.7.3 Fish Consumption Frequencies

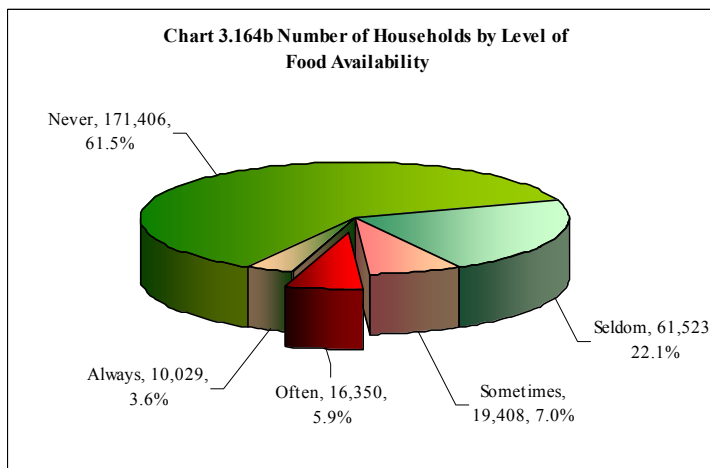
The number of agricultural households that had consumed fish during the week preceding the census was 158,464 (56.9% of the total agricultural household in Iringa region) with 95,403 households (60.2 % of those who consumed fish) consuming fish once during the respective week. This was followed by those who had fish twice during that week (25.7%). In general, the percentage of households that consumed fish twice or more during the week preceding the census in Iringa region was 63,061 (39.8% of the agricultural households that ate fish in the region during the respective period). About 43.1 percent of the agricultural households in Iringa region did not eat fish during the week preceding the census (Chart 3.164a and Map 3.60).



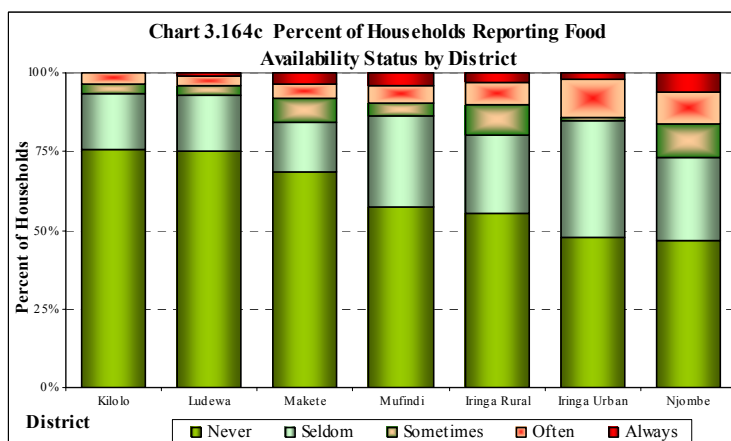


3.7.8 Food Security

In Iringa region, about 61 percent of the agricultural households (171,406 households) said they did not experience any food sufficiency problems, 61,523 households (22% of the total agricultural households in the region) said they rarely experienced problems in satisfying the household food requirements, whilst 19,404 households (7%) said they sometimes experience problems. However, 6 percent of agricultural households in the region (16,350 households) often experienced problems in satisfying their food needs and 4 percent (10,029 households) said they always had problems. (Chart 3.164b).



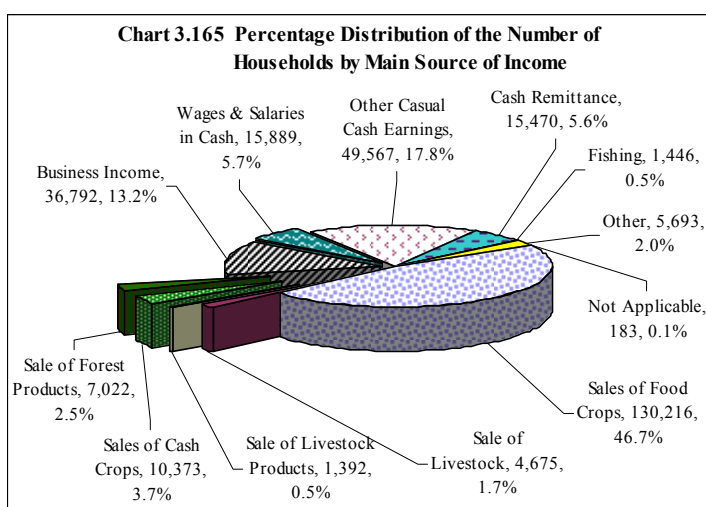
Njombe district has the highest percent of households that have problems in satisfying their household food requirements (26.9% of the agricultural households always or often having food problems). The percentage of households with food problems is also higher in Iringa Rural, Makete and Iringa Urban districts (Map 3.61).

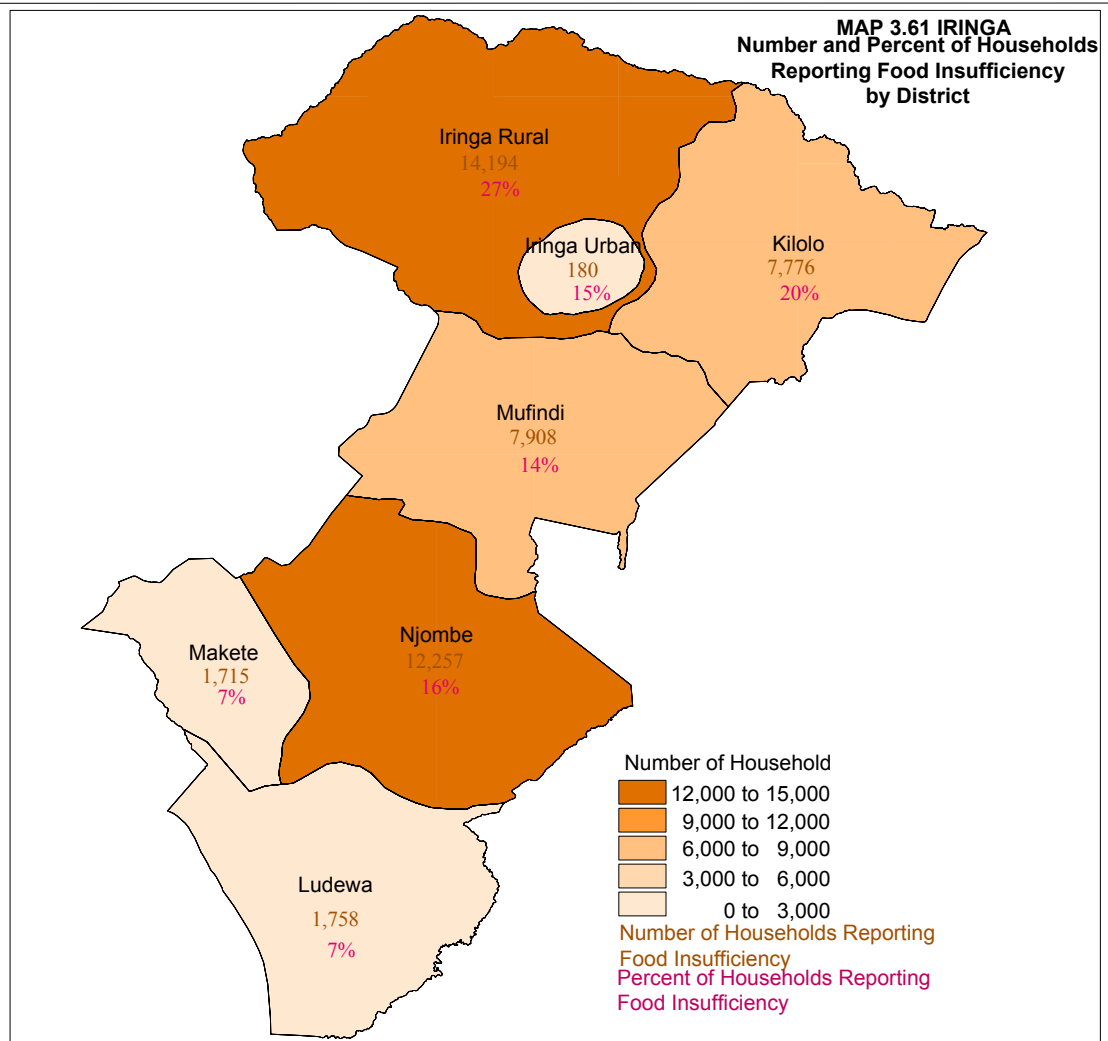


Kilolo and Ludewa districts have the lowest percent of households that always or often face food problems (between 6 and 9% of the agricultural households) (Chart 3.164c).

3.7.9 Main Sources of Cash Income

The results indicate that selling of food crops was the main cash income earning activity reported by 46.7 percent of all rural agricultural households, followed by casual labour (17.8%), businesses (13.2%), salaries and wages (5.7%) and cash remittances (5.5%). Other income earning activities were from cash crops (3.7%), forest products (2.5%), other (2%), livestock (1.7%), fishing (0.5%), and livestock products (0.5%) (Chart 3.165).





4.0 CONCLUSIONS

4.1 IRINGA REGIONAL PROFILE

4.1.1 Crops

Iringa has a land area of 500,000 hectares under crop production and the large majority of this land is planted with annual crops and it has a higher than average number of crop farmers compared to other regions. It has a moderate to low number of crop growing households per square kilometre compared to other regions. The available land area per household is 2.4 hectares, however the area of land utilised per household was less than the national average of 2.0 ha. Although the region receives only the long rainy season, Iringa is considered to be one of the more productive regions in Tanzania.

In terms of planted area, the region has a moderate planted area of cereals which is almost entirely with maize and virtually no paddy or sorghum production. Whilst the region has the fourth largest planted area of maize, it is characterized by having the highest production in the country due to higher yield than other regions with a larger planted areas. It has a moderate to high planted area of beans; however it has the second largest quantity produced in the country. During the census year it had the highest production of Irish potatoes, tomatoes, cabbage and peas than any other region in the country. Very little cassava and groundnuts are grown and virtually no traditional annual cash crops are grown in the region.

The planted area of permanent crops is small; however some bananas, coffee and tea are grown by smallholders.

Iringa has the second largest planted area with irrigation in Tanzania, however it only has a moderate percent of total planted area under irrigation. Rivers and canals are the most common sources of irrigation water, but wells are also used. Over fifty percent of households use buckets/watering cans for obtaining water, whilst the remaining households use the gravity method and the water is applied by buckets/watering cans and gravity. Most land preparation is done by hand, however approximately one third is by oxen.

Iringa has the highest percent of planted area with fertiliser (about 50% of the planted area). Of the area with fertiliser, half of it is applied with inorganic fertiliser and the other half with farm yard manure. It has the largest planted area with inorganic fertiliser. The region also has the largest planted area with pesticide application compared to other regions.

Iringa had the second highest quantity of maize stored in Tanzania however half was in sacks or open drums and the remainder in locally made traditional cribs. The region has one of the highest percentages of households processing crops and the vast majority is processed by neighbours machines. Most of the processed produce was sold to neighbours with small amounts to traders at the farm.

The region has the highest number of households receiving extension services and also the highest in terms of the percent of the number of households per region. It has the largest number of trees planted by smallholder households in the country (over 45,000,000) with Pinus being the dominant species. Some eucalyptus and cyprus are also grown. The region has the second highest number of households with erosion control/water harvesting bunds in Tanzania with erosion control bunds and terraces being the most common.

4.1.2 Livestock

Iringa has a low livestock population and density. The low numbers of cattle are mostly indigenous, however small numbers of improved dairy and beef cattle are kept. A small amount of milk is produced in the region with an above average farm gate price. The goat population is moderate to low compared to other regions and the density is also low. Very few sheep are kept in Iringa and it has the second highest population of pigs.

Chicken production is important in Iringa and it is the fifth highest producing region. Most of the chickens are indigenous. The region has the second highest number of broilers in the country and significant numbers of improved layers. Egg production is moderate to high. The use of organic fertilizer is moderate to high, however the area applied per household is less than in most regions. A moderate number of draft animals are used for cultivation.

The rate of disease infection is moderate for all diseases compared to other regions. Moderate access to most services exists in the region apart from veterinary clinics and hides and skin sheds. Iringa had the second highest percentage of households receiving livestock extension advice. In relation to livestock population Iringa receives disproportionately more extension advice compared to other regions with much higher livestock populations. Iringa has the second highest number of fish farmers in the country.

4.1.3 Demography and Living conditions

Iringa Region has a moderate agriculture population, 1,235,122 persons, of which 588,637 are males and 646,485 females representing the highest gender imbalance in the country. It has a high number of households involved in agriculture (278,717, 98% of the rural households) compared to other regions. It has a low average household size of 4.4 persons per household and it has the highest percent of female headed households in Tanzania (31%). Crop production is the dominant type of agriculture. It has one of the smallest percent of households keeping livestock in the country and there are no pastoralists.

Land ownership is mostly by customary law (70% of total land area under agriculture). Access to fields is low to moderate with 36 percent of the households having their nearest field less than 100 m from the homestead

Iringa has the third highest percent of literate rural agriculture population in the country (86%) and the difference between the literacy rate of males and females is moderate to high with 11 percent more literate males than females. It has a relatively high percent of the rural agriculture population that have completed school and one of the highest percent of household heads with education.

The most important livelihood activity is crop farming followed by tree/forest resources and remittances. Permanent crop farming is the least important. The percent of the rural agriculture population working full time in farming (71%) is moderate to high in the country. The main source of cash income is from the sale of food crops and a relatively high percent from other casual cash earnings. A very small amount of credit is available in the region and it is mostly through family friends and relatives.

Around 50 percent of households have the roof of the main dwelling made of modern material (mainly iron sheets) and the rest is with grass/leaves/mud. Iringa has the highest percent of households with toilets (99%). Energy for lighting is mainly from hurricane lamps and wick lamp. Iringa has the fifth highest percent of households using piped drinking water supply (over 25%) with unprotected wells being the next most important source of water.

Most rural agriculture smallholders are living a subsistence existence with around 55 percent of households using only 0 to 25% percent of their livelihood activities for non subsistence purposes. Animal protein is eaten between 1 and 3 times a week by most households and it has the smallest percent of households that eat animal protein every. It has the third highest percent of households that never experience food shortages. Access to services for the region is moderate. About 37.4 percent of the households in the region reported insufficiency of land.

4.2 DISTRICT PROFILES

The following district profiles highlights the characteristics of each district and compares them in relation to Population, Main crops and livestock, production and productivity, access to services and resources and levels of poverty.

4.2.1 Iringa Rural

Iringa Rural district has the third largest number of households in the region as well as third highest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock production. Neither livestock only households or pastoralist households are found in the district.

The most important livelihood activity for smallholder households in Iringa Rural district is annual crop farming, followed by off farm income, tree or forest resources, livestock keeping/rearing, remittances, permanent crop farming and fishing/hunting & gathering. However, the district has the second highest percent of households with off-farm activities and it has one of the highest percent of households with more than one member with off-farm income. Compared to other districts in the region, Iringa Rural has the third highest percent of female headed households (31%) and is among the districts with the second lowest average age of the heads of households. The literacy rates for the heads of household is also slightly lower than most of districts in the region.

Compared to other districts, it has a moderate utilized land area per household of 1.7 ha and 81 percent of the available land area is currently being utilised. The district has the third largest planted area in the region and it has the second largest planted area per household (0.73 ha).

The district is moderately important for maize production in the region with a planted area of over 50,332 ha, however the planted area per household is the second largest in the region. Paddy production is relative important with a planted area of 3,745 hectares which is the largest in the region. Sorghum production is also important with a planted area of 1,438 ha and is the largest in the region. Iringa Rural district is the only district in the region that produces bulrush millet (86 ha). Cassava production is moderate accounting for 9 percent of the area planted in the region and Irish potatoes are planted in small quantities (60 ha). Production of beans in Iringa Rural is moderate with a planted area of 8,336 ha. Oilseed crop production is important with the district ranking second in oil seeds production in the region. Vegetable production in the district is relatively small, with some tomatoes, chilies and spinach (343 ha, 195 ha and 63 ha respectively). The districts accounts for 18 percent of the tomato production, 89 percent of the chili production and 60 percent of the spinach production in the region. Traditional cash crops (e.g. tobacco, pyrethrum and coffee) are grown in very small quantities.

Compared to other districts in the region, Iringa Rural has a moderate planted area with permanent crops, which is dominated by Pears (1,037 ha), bananas (883 ha) and mango (801 ha). Other permanent crops are either not grown or are grown in very small quantities.

Most land clearing and preparation in Iringa Rural district is done by hand, however some bush clearance and burning was also done. The district has the largest planted area of “No land clearance” in the region. Land preparation is mostly done by hand and to some extent by oxen.

The use of inputs in the region is moderate and district differences exist. Iringa Rural ranked third in planted area with improved seed in Iringa region. The district has a moderate planted area with fertilisers (Farm yard manure, compost and inorganic fertiliser), however it has the third highest percent of planted area with fertiliser in the region and most of it is

farm yard manure. Compared to other districts in the region, Iringa Rural district has a relatively low level of insecticide use and a moderate level of fungicide use. The district has the highest percentage of households that used herbicide in the region. Compared to other districts in Iringa region, Iringa Rural has the second largest area with irrigation (5,938 ha of irrigated land), however, it has the second highest percent of irrigated area in the region. The most common source of water for irrigation is from rivers using gravity and hand buckets. The most common means of irrigation water application are flood and bucket/watering can.

The proportion of households storing crops in Iringa Rural is moderately high compared to other districts in the region and the most common method of crop storage is in sacks/open drums. The district has a relatively moderate number of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. Iringa Rural district has the third lowest percent of households processing crops in Iringa region and is mostly done by neighbour's machine. The district has the highest percent of households selling processed crops and most of the processed products are sold to neighbours and traders at farm. Some sales were made to local markets/trader stores. Access to credit in the district is very small and is mainly from family, friends and relatives.

A comparatively larger number of households receive extension services in Iringa Rural and almost all of this is from the government. The quality of extension services was rated between very good and good by the majority of the households.

There are 612,718 planted trees on smallholder plots in the district and is mostly Eucalyptus with some Cyprus and senna spp. The second lowest proportion of households with erosion control and water harvesting structures is found in Iringa Rural district and is mostly erosion control bunds; however it also has the highest number of terraces, gabions/sandbags and drainage ditches than other districts in the region.

The district has the third largest number of cattle in the region and they are almost all indigenous. Goat production is moderate compared to other districts; however it has the second largest population of sheep in the region. It has comparatively small number of pigs in the region and a moderate number of chickens. Although small, the district has the third largest number of layers in the region. Though small, the number of ducks and donkeys in Iringa Rural district is the second largest in the region. Rabbits and turkeys are also found in the district. The smallest number of households reporting tsetse problems is found in Iringa Rural district, however the district has a moderate to low percent of households reporting tick problems. It has the second smallest number of households de-worming livestock. The use of draft animals in the district is moderate to low and fish farming is not practiced in the district.

It is among the districts with the best access to feeder roads, primary and secondary markets, however it has the worst access to hospitals and health clinics. Access to all weather roads and tarmac roads is good, and it has a moderate to good access to primary schools, regional capital and tertiary markets.

Iringa Rural district has the highest percent of households with no toilet facilities. It has the largest number of households owning mobile phones and the third largest number of households owning radios, irons, bicycles and Tv/video. It also has the second largest number of households owning wheel barrows. The district has the second largest number of households using mains electricity in the region. The most common source of energy for lighting is the hurricane lamp followed closely with wick lamp and practically all households use firewood for cooking. The district has the smallest percent of

households with grass roofs and 43 percent of households have iron sheet roofing. The most common source of drinking water in the district is piped water. The district has the highest percent of households having 2 or 1 meal per day and it has the lowest percent of households having 3 meals per day. The district has the third highest percent of households that did not eat meat or fish during the week prior to enumeration, and most households have no problems in satisfying their food requirements.

4.2.2 Mufindi

Mufindi district has the second largest number of households in the region and it has the highest percentage of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock production. Neither livestock only households or pastoralist households are found in the district.

The most important livelihood activity for smallholder households in Mufindi district is annual crop farming, followed by off farm income. The district has the third lowest percent of households with no off-farm income activities, however, it has the third highest percent of households with more than one member with off-farm income. Compared to other districts in the region, Mufindi has the highest percent of female headed households (38%) and it is among the districts with the second lowest average age of the household head in the region. With an average household size of 5 members per household it is one of the highest in the region.

The district has the highest literacy rate in the region and this is reflected in the concomitant high level of school attendance in the district. The literacy rates for the heads of households are also high.

It has a moderate utilized land area per household (1.8 ha) and 73 percent of the allocated area is currently being utilised. The district has the second largest planted area in the region, and the third largest planted area per household (0.6 ha).

The district is important for maize production in the region with a planted area of over 55,370 ha, and the planted area per household is also moderate for the region. The district is not important for paddy production with a planted area of only 104 hectares and sorghum is not grown in the district. Cassava production is moderate to low, accounting for 4 percent of the quantity harvested in the region. The district has a moderate planted area of Irish potatoes (1,051 ha) which is the third largest in Iringa region. The district has the second largest planted area of beans in the region with a planted area of 14,151 ha, however the district has the largest groundnut planted area in the region with area planted per groundnut growing household of 0.91 ha. Vegetable production is small in the district with only a planted area of 5.5 and 9.5 percent of the total tomato and cabbage planted area in the region. Onion and chillies were not grown in the district. Traditional cash crops (e.g. pyrethrum) are grown in very small quantities.

Compared to other districts in the region, Mufindi has the fourth largest planted area with permanent crops which is dominated by bananas (4,623 ha), mango (1122 ha), coffee (284ha) and star fruits (202 ha). Other permanent crops are either not grown or are grown in very small quantities.

Most land clearing in Mufindi district is done by hand, however the district has the largest planted area of bush clearance and burning in Iringa region. Most land preparation in Mufindi is done by hand and to some extent by oxen. Very small amount of land preparation is done by tractor

The use of inputs in the region is moderately high and district differences exist. Mufindi has the second largest planted area with improved seed in the region and has the third highest proportion of households using improved seeds in Iringa

region. The district has the second largest planted area with fertilisers (Farm yard manure, compost and inorganic fertiliser), however it has the fourth largest planted area with fertiliser in the region. Most of the fertiliser used is farm yard manure. Compared to other districts in the region, Mufindi district has one of the highest levels of insecticide use. The use of fungicides is the lowest in the region and the application of herbicides was moderate. It has a small area with irrigation compared to other districts with 2,616 ha of irrigated land. The most common source of water for irrigation is from rivers using gravity and hand buckets. Flood and buckets/watering cans are the most common means of irrigation water application and a very small amount of water hose and sprinkler irrigation is used.

The proportion of households storing crops in Mufindi district is the third highest in the region and the most common method of crop storage in the district is in sacks/open drums and in locally made traditional cribs. Mufindi is one of the districts with a moderate number of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. It is among the districts with the highest percent of households processing crops in Iringa region and is almost all done by neighbour's machine. The district also has the highest percent of households selling processed crops to marketing cooperatives than other districts and no sales are made to farmers associations or large scale farms. Access to credit in the district is very small and the main source is "Religious Organisation/NGO/Project. The district also has the highest percent of households sourcing credit from private individual and traders/trade stores. For those not accessing credit the main reasons are lack of awareness and non availability of credit.

A comparatively smaller number of households receive extension services in Mufindi district and most of this is from the government. The quality of extension services was rated between very good and good by the majority of the households.

Tree farming is important in Mufindi with 9,504,336 planted trees and is mostly Pinus and Eucalyptus. The lowest proportion of households with erosion control and water harvesting structures is found in Mufindi district and they are mostly erosion control bunds and water harvesting bunds, however it also has some vetiver grass, drainage ditches and tree belts.

The district has the second largest number of cattle in the region and they are almost all indigenous. Goat production is high compared to other districts and it has the fourth largest population of sheep in the region. It has the also largest number of both pigs and chicken in the region. The district has the largest number of rabbits and turkeys in the region. Some ducks and donkeys are also found in the district. A moderate number of households reported tsetse and tick problems in Mufindi district and it has the second largest number of households de-worming livestock. The district has the third highest proportion of households using draft animals in the region. A small number of households practice fish farming, however the district has the largest number in the region.

The district has the best access to feeder roads and primary markets and a moderate to good access to secondary markets and tarmac roads. However, it has the worst access to primary and secondary schools, all weather roads, hospitals, health clinics, regional capital and tertiary markets.

The percentages of households without toilet facilities in Mufindi district is relatively small compared to other districts. The district has the second largest number of households owning radios, mobile phones, iron and bicycles, however it has the largest number of households owning Tv/video and vehicles. Mufindi district has the first largest number of households using mains electricity in the region. The most common source of energy for lighting is the wick lamp,

followed closely by the hurricane lamp and the majority of the households use firewood for cooking. The roofing material for most of the households in the district is grass/leaves (45%) and iron sheets (42%). The most common source of drinking water is unprotected wells, followed closely by piped water. It is one of the districts with the highest percent of households having 3 meals per day. The district has the second highest percent of households that did not eat meat or fish during the week prior to enumeration, and most households in the district never experience problems in satisfying the household food requirements.

4.2.3 Njombe

Njombe district has the largest number of households in the region and it has one of the highest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock farming. Neither livestock only households nor pastoralist households are found in the district.

The most important livelihood activity for smallholder households in Njombe district is annual crop farming, followed by off-farm income. However, the district has the third lowest percent of households with no off-farm activities and the third lowest percent of households with more than one member with off-farm income. Compared to other districts in the region, Njombe is one of the districts with the lowest percent of female headed households (26%) and it has the second lowest average age of the household head in the region. With an average household size of 5 members per household it is one of the highest in the region. Although Njombe has a high literacy rate among smallholder households, it is average for the region.

The land area utilized per household (1.8 ha) is slightly above the regional average and 82 percent of the allocated area is currently being utilized. The district has the largest planted area in the region and the fifth largest planted area per household (0.50 ha) in the wet season and 0.20 ha per household in the dry season.

The district is very important for maize production in the region with a planted area of over 61,800 ha, the largest in the region. The planted area per household is 0.79 ha which is slightly below regional average of 0.93 ha. Paddy production with a planted area of only 174 hectares, is not important in the district, however it is the fourth largest in the region. The district has a comparatively low production of sorghum, however it has the largest planted area of Irish potatoes (9,981 ha) and the second largest planted area of wheat (4,244 ha). The district has moderate to low planted area of cassava accounting for 8.3 percent of the cassava planted area in the region. Bean production in Njombe district with a planted area of 16,569 ha, is much higher than in other districts in the region. Oilseed crops are important in Njombe district with groundnuts accounting for 24 percent of the total groundnuts planted area and 43 percent of the sunflower planted area in Iringa. Though small, the district is important in vegetable production accounting for 87, 42, and 36 percent of the cabbage, spinach and tomato production in Iringa region respectively. Tobacco is not grown in the district.

Permanent crops are not important in Njombe district only (8% of the total permanent crop planted area in Iringa region) The most prominent permanent crops in the district include banana (935 ha), coffee (512 ha) mango (329 ha) and pitches (67 ha). Other permanent crops are either not grown or are grown in very small quantities.

Most land clearing is done by hand slashing, however it has a moderate area cleared by burning. The district has the smallest planted area of "No land clearance" in the region. Practically all land preparation is done by hand, however a very small amount of land preparation is done by oxen and tractor.

The use of inputs in the region is comparatively high, however district differences exist. Njombe has a comparatively small planted area with improved seed in Iringa region. The district has the largest planted area with fertilisers (Farm yard manure, compost and inorganic fertiliser), however it has the second highest percent of planted area with fertiliser in the region. Most of the fertiliser used is the inorganic type followed by farm yard manure. Compared to other districts in the region, Njombe district has the second highest percent of planted area with insecticides, however it has the highest percent of planted area with fungicide in the region. The use of herbicides is relatively small. It has a relatively small area with irrigation in the region with 1,015 ha of irrigated land. The most common source of water for irrigation is from rivers using gravity and almost all water application is by flood and hand buckets/watering cans.

The proportion of households not storing crops in Njombe district is moderate to high for the region and the most common method of crop storage is in sacks/open drums and in locally made traditional cribs. The district has the second highest percent of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. Njombe district has a comparatively low percent of households processing crops in the region and is almost all done by neighbours machine, however the percent of households processing crops on farm by hand in the district is the highest in the region. Most of the sales of the processed products are to neighbours, however the district has the highest percent of households selling processed products to Farmers Associations. Small quantities of processed crops are sold to traders at farm and marketing cooperatives. Very few households have access to credit mainly from relatives and friends. For those not accessing credit, the main reasons are lack of awareness and non availability.

A moderate number of households receive extension services in Njombe district and most of this is from the government. The quality of extension services was rated between very good and good by the majority of the households.

Tree farming though small but is important in Njombe district with 2,454,303 planted trees and is mostly Pinus Spp and Eucalyptus Spp with some Cyprus Spp, Gravellia Spp, Senna Spp, Syzygium Spp, Melicia Spp, Tectona Spp, Azadirachta Spp and Afzelia Spp. The second highest proportion of households with erosion control and water harvesting bunds is found in Njombe district and it also has the largest number of erosion control bunds in the region.

The district has a moderate to a small number of cattle in the region and they are almost all indigenous. Goat and sheep production is moderate compared to other districts and it has the second smallest number of sheep in the region. It has the fourth largest number of pigs in the region and the second largest number of chickens, most of which are indigenous. Very few layers are found in the district. The district has the second lowest number of ducks, the second largest number of rabbits and the smallest number of donkeys. No turkeys were found in the district. Although only a small number of households reported tsetse problem in Njombe district, a relatively large number of households reported tick problems. Compared to other districts, Njombe has the highest percent of livestock keeping households practicing livestock deworming. A moderate number of households use draft animals. The district has the second smallest number of households practicing fish farming in the region.

Compared to other districts, Njombe has the best access to feeder and all weather roads and a moderate to good access to secondary schools, primary markets and tarmac roads. However, it has one of the worst access to primary schools, tertiary markets, regional capital, hospitals and health clinics.

The percentage of households without toilet facilities in Njombe district is the second highest in the region. The region has the largest number of households owning radios, iron, wheel barrows and bicycles. It has the relative low percent of

households owning land line phones and vehicles, however it has one of the highest percent of households owning Tv/video. It has the third lowest number of households using mains electricity in the region and the most common source of energy for lighting is the wick lamp, followed by hurricane lamp and practically all households use firewood for cooking. The district has a moderate to low percent of households with grass roofs and over fifty percent of the households have iron sheet roofing. The most common source of drinking water is piped water, followed by unprotected springs. Njombe has the third highest percent of households having 2 meals per day, however it has the third lowest percent of the households having 3 meals per day. The district has the highest percent of households that did not eat meat or fish during the week prior to enumeration and most households have no problems in satisfying the households food requirements.

4.2.4 Ludewa

Ludewa district has the second smallest number of households in the region and it has the second smallest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock farming. Neither livestock only households nor pastoralist households are found in the district.

The most important livelihood activity for smallholder households in Ludewa district is annual crop farming followed by tree forest resources. It has the second highest percent of households with no off-farm activities and a relatively low percent of households with more than one member with off-farm income. Compared to other districts in the region, Ludewa district has a relatively high percent of female headed households (34%) and has the lowest average age of the household head. With an average household size of 4 members per household it is average for the region. Ludewa district has a comparatively high literacy rate among smallholder households and this is reflected by the concomitant relatively high level of school attendance in the region.

It has a moderate utilized land area per household (1.9 ha) and only 69 percent of the allocated land area is utilised. The total planted area is moderate to low; however it has the fourth largest planted area per household of 0.55 ha in the wet season and 0.20 ha in the dry season.

Compared to other districts, Ludewa is not important for maize and paddy production in Iringa region (planted area of 20,710 ha for maize and 339 ha for paddy). The area planted with wheat in Ludewa district accounts for 9 percent of the total area planted with wheat in Iringa region. Small amount of sorghum is also grown. Roots and tuber crops are relatively important in the district with the largest planted area of cassava in Iringa region (3,605 ha) and 614 ha of Irish potatoes. The district is also moderately important for bean production. Oilseed crops and vegetables are not important in the district, with small amounts of sunflower, groundnuts, cabbage, tomatoes, onions, spinach and amaranths produced. Traditional cash crops (e.g., tobacco and cotton) are not grown in the district.

Compared to other districts in the region, Ludewa has the smallest planted area with permanent crops (6.3% of total permanent crop planted area) which is dominated by pears (752 ha), pitches (508 ha), banana (265 ha), and coffee (151 ha). Small areas of avocado, plums and sugarcane are also grown.

As with other districts in the region, most land clearing and preparation is done by hand and it has the second smallest land preparation done by oxen in the district.

As with other districts in the region, land clearing by hand slashing is predominant and practically all land preparation is by hand.

The use of inputs in the region is relative large and district differences exist. Ludewa district has the second smallest planted area with improved seed and it also has the second smallest planted area per household in the region. The district has the third smallest percent of planted area with fertilisers (farm yard manure, compost and inorganic), and most of this is with inorganic fertiliser. Compared to other districts in the region, Ludewa district has relative high percent of its planted area applied with insecticide. The percent of planted area with fungicides is moderate and has a moderate to low use of herbicides. It has one of the smallest areas of irrigation 39 ha. The most common source of water for irrigation is from canals using hand buckets. Buckets/watering cans are the most common means of irrigation water application in the district.

The proportion of households not storing crops in Ludewa district is moderate to low compared to other districts in the region. The most common method of crop storage in the district is in locally made traditional cribs, followed by sacks/open drums. The number of households selling crops in the district is comparatively small, however for those who did not sell, the main reason for not selling is insufficient production. A relatively high percent of households processing crops in Iringa region is found in Ludewa district and processing is mostly done by neighbours machine. The district has the third highest percent of households processing crops on farm by machine and it has the third lowest percent of households processing crops on farm by hand. Most households that sell crops sell to neighbours. Although the district has the highest percent of households selling processed products to local markets/trade stores. No sales are made to traders on farm nor large scale farms. Access to credit in the district is very small and the main source is from Religious Organisations/NGO/Project. For those not accessing credit, the main reasons are lack of awareness and non availability of credit.

A relatively small number of households receive extension services in Ludewa district and almost all of this is from the government. The quality of extension services was rated between very good and good by the majority of the households.

Tree farming is equally important in Ludewa district with 6,968,372 planted trees not weighted and most of them are Pinnus Spp, Cyprus Spp and eucalyptus Spp. Ludewa district has the third largest proportion of households with erosion control and water harvesting structures in Iringa.

Ludewa district has the second smallest number of cattle in the region and most of them are indigenous. It is one of the districts with a moderate number of goats in the region, however the district has the relative high density (10 head per km²). Ludewa is also one of the districts with a relatively small number of sheep and pigs, however it has a moderate number of chickens. The district has the smallest number of improved chickens (all layers) in the region. Compared to other districts, the district has the largest number of ducks in the region and a small numbers of rabbits and turkeys. Donkeys are not found in the district. A moderate number of households in Ludewa district reported tsetse and tick problems and it has one of the smallest numbers of households de-worming livestock. The use of draft animals in the district is the smallest in the region.

Though small, the proportion of households practicing fish farming in Ludewa is the highest in the region. Compared to other districts, Ludewa is among the districts with the best access to primary schools and health clinics and a moderate access to hospitals. However, it has the worst access to the regional capital, tarmac roads, feeder roads, all weather roads, secondary schools and primary, secondary and tertiary markets.

Ludewa district has a relatively low percent of households with no toilet facilities. The district has one of the smallest number of households owning vehicles, mobile phones and wheel barrows and it has a moderate number of household

owning bicycles, radios and irons. It has the fourth smallest number of households using mains electricity in the region. The most common source of energy for lighting is the hurricane lamp and practically all households use firewood for cooking. The district has the second largest percent of households with grass roofs and over fifty percent of households have iron sheet roofing. The most common source of drinking water is piped water, followed by surface water (lake/river/dam/stream) and it has the third lowest percent of households having 2 or 3 meals per day compared to other districts. It has the second highest percent of households having 1 meal per day. The district has a relatively small number of households that did not eat meat or fish during the week prior to enumeration and most households seldom had problems in satisfying the household food requirements.

4.2.5 Makete

Makete district has the third smallest number of households in the region and it has the second lowest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock farming. Neither livestock only households nor pastoralist households are found in the district.

The most important livelihood activity for smallholder households in Makete district is annual crop farming followed by tree/forest resources, livestock keeping/herding, off-farm income, remittances, permanent crop farming and fishing/hunting and gathering. The district has the highest percent of households with no off-farm activities as well as the lowest percent of households with more than one member with off-farm income. Compared to other districts in the region, Makete has the second lowest percent of female headed households (28%) and has the highest average age of the household head in the region. With an average household size of 4 members, it is average for the region. Although the literacy rate among smallholder households in Makete district is high, it is the lowest in the region. The district has also a comparatively lower literacy rate for the heads of households and the rate of "Never Attended" is among the highest in the region.

It has a moderate utilized land area per household of 1.9 ha which is slightly larger than the regional average of 1.6 ha per household. The district has the second smallest planted area in the region and the second smallest planted area per household (0.47 ha) in the wet season.

Compared to other districts, Makete with a maize planted area of 16,476 ha, is not important for maize production in Iringa region and the planted area per household is the second lowest in the region. The district has the largest planted area of wheat in Iringa region (7,923 ha) accounting for 49 percent of the total wheat planted area in the region. Paddy production is not important in the district (a planted area of only 304 hectares). Finger millet and sorghum are also grown in the district. The district has the second largest planted area of Irish potatoes however cassava is not grown in the district. Other roots and tuber crops are grown in small quantities. The production of beans in Makete district is the second smallest in the region with a planted area of 2,868 hectares. Oil crops such as groundnuts and simsim are also grown in the district but in small quantities. Vegetable production is not important in the district with the district having the smallest planted area per tomato growing household in the region. Traditional cash crops (e.g. tobacco and cotton) are not grown in the district.

Compared to other districts in the region, Makete has one of the largest planted area with permanent crops (5,979 ha) which is dominated by banana (1,415 ha), pitches (1,181 ha), coffee (1,016 ha), avocado (777 ha) and mango (606 ha). Other permanent crops are either not grown or are grown in very small quantities.

As with other districts in the region, most land clearing is done by hand slashing, however the planted area with "no land clearing" is the second largest in the region, indicating the presence of a large area of bare land before cultivation.

Practically all land preparation is done by oxen. Land preparation in Makete district is mostly done by hand, however there is a comparatively large areas cultivated by oxen.

The use of inputs in the region is relatively big and district differences exist. Makete has the largest planted area with improved seed in Iringa region and the proportion of households using improved seeds is moderate compared to other districts in Iringa region. The district has the third smallest planted area with fertilisers and most of this is with farm yard manure and inorganic fertilisers. Compared to other districts in the region, Makete district has the lowest percent of its planted area with insecticides in the region. The use of fungicides was the third lowest in the region and the district has the second lowest percent of planted area with herbicides. It has a moderate planted area with irrigation in the region with 3,936 ha of irrigated land. Canal, wells and rivers are the main sources of irrigation water and hand bucket is the main method used for obtaining irrigation water, followed by gravity. The most common means of irrigation water application is by using buckets/water cans, however some amount of flood irrigation is also practiced.

The proportion of households not storing crops in the district is the second lowest in the region and most common method of crop storage is in sacks/open drums and in locally made traditional cribs. The district has the largest number of households selling crops, however for those that did not sell the main reason for not selling is insufficient production. Makete district has the second highest percent of households processing crops on farm by hand and the highest percent of those processing by factory. A small percent of households, sale processed crops to neighbours and trader at farm. No sales were made to local markets/trade store, farmers associations, marketing cooperatives or large scale farms. The district has the highest proportion of households that accessed to credit in the region mainly from family, relatives and friends. For those who did not use credit it, the main reasons are non availability and lack of awareness.

A comparatively large number of households receive extension services in Makete district and most of this is from the government. The quality of extension services was rated between good and very good by most of the households.

Tree farming is important in Makete with 21,019,819 planted trees and is mostly with Pinus, Cyprus, Eucalyptus, Leucena, Acacia and some Graviola, Tectona grandis, Azadirachta Spp and Moringa Spp. The second largest number of erosion control and water harvesting structures are found in Makete district. Other erosion control and water harvesting structures found in the district include, vetiver grass, tree belts, drainage ditches, terraces and gabions/sandbags.

The district has the largest number of cattle in the region and they are almost indigenous. Also it has the largest production of sheep and second largest production of goats and pigs in the region. It has a relatively small number of chicken and they are mostly indigenous. Makete district has the largest number of donkeys, however it has the second smallest number of rabbits. Ducks and turkeys are not found in the district. A moderate number of households reported tsetse and tick problems in Makete district and has one of the smallest number of households de-worming livestock. The use of draft animals in the district is the highest in the region. Makete has the smallest number of households practicing fish farming in Iringa region.

Makete is among the districts with the best access to primary schools, good access to all weather roads and hospitals and moderate to good access to health clinics and tertiary market. However, it has one of the worst access to secondary schools, feeder roads, regional capital, primary and secondary markets and tarmac roads.

Makete district has a moderate to high percent of households with no toilet facilities. Very small number of households reported ownership of landline phones, vehicles, mobile phones and televisions/videos. It has the second smallest number of households using mains electricity in Iringa region. The most common source of energy for lighting is wick lamps, followed by hurricane lamps and practically all households use firewood for cooking. The district has a moderate percent of households with grass roofs, however over fifty percent of households have iron sheet roofing. The most common source of drinking water is from piped water. It has the second lowest percent of households having 2 meals per day compared to other districts and is among the districts with a high percent of households with 3 meals per day. The district has a relatively small number of households that did not eat meat during the week prior to enumeration, however it is among the districts with a moderate percent of households that did not eat fish during the week. Most households in the district have no problems in satisfying the household food requirements.

4.2.6 Iringa Urban

Iringa Urban district has the smallest number of households in the region and it has the smallest percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock production. Neither livestock only households nor pastoralist households are found in the district.

The most important livelihood activity for smallholder households in Iringa Urban district is annual crop farming, followed by off farm income, tree/forest resources, remittances and livestock keeping/herding. The district has the highest percent of households with off-farm activities and the highest percent of households with more than one member with off-farm income. Compared to other districts in the region, Iringa Urban has one of the lowest percent of female headed households (26%) and has the second highest average age of the household head. With an average household size of 4 members it is average for the region. The literacy rate among smallholder households in Iringa Urban district is the third highest in the region. The district has the highest percent of those who have completed different levels of education.

The district has the smallest utilized land area per household (1.2 ha) in Iringa region. The total planted area is the smallest in the region. However the planted area per household in the wet season and has the smallest planted area per household (0.41 ha) per household in the region.

Iringa Urban district is not important for maize production with a planted area of only 728 ha, and the planted area per household is also lowest in the region. Other cereal crops such as paddy, sorghum, finger millet, bulrush millet, wheat and barley are not produced in the district. The district has the smallest area planted with beans in Iringa region, however it has the largest planted area of field peas and the third largest planted area of cow peas (673 ha). Green grams are not produced in the district.

Cassava production is relatively small accounting for 0.1 percent of the total cassava production in the region. Oilseed crops are not important with the district having the smallest planted area of sunflower and groundnuts. Few vegetables are not grown in the district with tomatoes, spinach and chillies produced in very small quantities. Traditional cash crops (e.g. tobacco and cotton) are not grown in the district. No permanent crops were grown in Iringa Urban district.

Most land clearing in the district is done by hand slashing. It has also the smallest area of bush clearance in the region. Most land preparation is done by hand, however the district has the lowest planted area cultivated by oxen in Iringa region. A very small amount of land preparation is done by tractor.

The use of inputs in the region is comparatively high and district differences exist. Iringa Urban has a smallest planted area with improved seed in Iringa region. The use of fertiliser in the district is comparatively high (72% of the total planted area in the district) is mostly inorganic fertiliser and farm yard manure. Compost is used in small quantities. Compared to other districts in the region, Iringa Urban district has a moderate planted area with insecticides and a small planted area with fungicide application. It has the second largest planted area applied with herbicides. The district has the smallest area with irrigation with only 37 ha of the planted area under irrigation. The most common source of water for irrigation is from rivers using hand buckets. Buckets/watering cans are the only means of irrigation water application in the district.

The proportion of households not storing crops in the district is the highest in Iringa region. The most common method of crop storage is in sacks/open drums. The district has the smallest number of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. Iringa Urban is among the districts in Iringa region with a high percent of households processing crops and is mostly done using neighbour's machines. The district also has the highest percent of households in Iringa region processing crops by traders. The district sale processed products only to large scale farms. Access to credit is non-existent in the district and the main reason for not using credit is lack of awareness.

More than fifty percent of households in Iringa Urban district receive extension services, mostly from the government. The quality of extension services was rated "good" by the majority of the households, however a small percent of households rated the services as "very good".

Tree farming is not important in Iringa Urban district. No planted trees were recorded in the district. The district has the third largest proportion of households with erosion control and water harvesting structures in Iringa region.

The district has the smallest number of cattle in the region and they are mostly indigenous. Goats, sheep and pig production is smallest in the region. It has the smallest number of chickens and there are very few ducks and rabbits. Donkeys and turkeys are not found in the district. It has the highest proportion of households reporting tsetse and tick problems in the region, however livestock de-worming is practically non-existent. Use of draft animals is comparatively small and fish farming is not practiced in the district.

The district has one of the best access to infrastructure and services in Iringa region, with the exception of secondary markets whose access is moderate. However, the district has one of the worst access to all weather roads.

All households in Iringa Urban district have toilet facilities. Iringa Urban has the smallest percent of households with mobile phones, wheel barrows and Tv/videos. No households reported owning landline phones and vehicles in the district. It has the smallest number of households using mains electricity. The most common source of energy for lighting is the wick lamp followed by hurricane lamps, Almost all households use firewood for cooking. The district has a moderate to high percent of households with grass roofs, however over fifty percent of households have iron sheet roofing. The most common sources of drinking water are unprotected wells and springs. Compared to other districts, Iringa Urban has the lowest percent of households having 3 meals per day and a moderate percent having 1 meal per day, however it has the highest percent of households having 2 meals per day. The district has a moderate to low percent of households that did

not eat meat or fish during the week prior to enumeration, however most households seldom had problems in satisfying the households food requirements.

4.2.7 Kilolo

Kilolo district has the fourth largest number of households in the region and has a high percent of households involved in smallholder agriculture in the region. Most smallholders are involved in crop farming only, followed by crop and livestock production. Livestock only households and pastoralist households are not found in the district.

The most important livelihood activity for smallholder households in Kilolo district is annual crop farming, followed by off farm income, tree/forest resources, livestock keeping/herding, permanent crop farming, remittances and fish/hunting and gathering. However, the district has a moderate to high percent of households with no off-farm activities and a moderate percent of households with more than one member with off-farm income compared to other districts in the region, Kilolo is among the districts with the lowest percent of female headed households (26%) in Iringa region and it has the second lowest average age of the household head. With an average household size of 5 members, it is one of the largest in the region. Kilolo has a comparatively high literacy rate among smallholder households and this is reflected by the relatively high level of school attendance in the region. The literacy rate for the heads of household is among the highest in the region.

The district is moderately important for maize production in the region with a planted area of 48,457 ha and the planted area per maize growing household is the largest in the region. The district is not important for wheat production and paddy is not produced. Cassava production is small accounting for only 2.1 percent of the cassava planted area in the region and Irish and sweet potatoes are grown in comparatively small quantities. The production of beans in Kilolo, though relatively small (4,905 tonnes) is the third highest in the region. Other pulses produced in the district are of minor importance. Oilseed crops are moderately important in Kilolo. Though small, the district is comparatively important for vegetable production and has the largest planted area of tomatoes (1,712 ha) and onions (273 ha) in the region. Other vegetables such as okra, spinach and pumpkins are grown in small quantities. Although it is known that tobacco is grown in this district in small quantities, it was not captured during the census.

Compared to other districts in the region, Kilolo has the largest planted area with permanent crops which is dominated by banana (3,707 ha) and pears (913 ha). Small quantities of mango and coffee are also grown. Other permanent crops are either not grown or are grown in very small quantities.

Most land clearing is done in the district is by hand, however it has a moderate planted area with “no land clearing” indicating the presence of areas of bare land before cultivation. Most land preparation is done by hand, however it has a comparatively large planted area cultivated by oxen. A very small amount of land preparation is done by tractor.

The use of inputs in the region is high, however district differences exist. Kilolo has a moderate percentage of its planted area with improved seed. The district has the second lowest percent of its planted area applied with fertilizers (farm yard manure, compost and inorganic), however most of this is farm yard manure. The district has a relatively low level of insecticide use, however it has one of the highest levels of fungicides use. The use of herbicides, though small, was the third highest in the region. It has the second largest area of irrigation in Iringa region with 4,811 ha of irrigated land. The most common source of water for irrigation is from rivers using gravity. Flood and buckets/watering cans are the most common means of irrigation water application and a very small amount of sprinkler is used.

The proportion of households not storing crops in the district is the second lowest in the region. The most common method of crop storage is in locally made traditional cribs, followed by and sacks/open drums. The district has a moderate number of households selling crops, however for those who did not sell, the main reason for not selling is insufficient production. The second lowest percent of households processing crops in Iringa region is found in Kilolo district and this is mostly done using neighbour's machines, followed by processing on farm by hand and on farm by machines. Kilolo district has the second percent of households selling processed crops mostly to neighbours and local markets/trade stores. There is a small number of households accessing credit in the district, mainly from Religious Organisations/NGO/Project. For those not accessing credit the main reasons are lack of awareness and non availability.

A comparatively large number of households received extension services in Kilolo district and almost all of this is from the government. The quality of extension services was rated between very good and good by the majority of the households.

Tree farming though relatively small is important in Kilolo with 6,362,875 planted trees and is mostly Pinus Spp and Eucalyptus Spp with some Cyprus Spp, Gravella Spp, Moringa Spp, Azadritachta Spp and Senna Spp. The highest proportion of households with erosion control and water harvesting structures is found in Kilolo district and is mostly terraces and erosion control bunds, however it also has a comparatively large number of water harvesting bunds and vetiver grass.

The district has the fourth largest number of cattle in the region and they are almost all indigenous. Goat production is moderate to low compared to most other districts; however it has a relatively small population of sheep compared to other districts in the region. It has the third largest numbers of pigs in the region and a moderate to low number of chickens, all of which are indigenous. Small numbers of ducks and rabbits are found in the district, however the turkey population is the second largest in the region. Donkeys were not found in the district. The moderate number of households reporting tsetse and tick problems was Kilolo district, however it is one of the districts with a small number of households de-worming livestock. It has the second largest proportion of households using draft animals is in the region. The proportion of households practicing fish farming in Kilolo district is the second highest in the region.

The district has one of the worst access to infrastructure and services with the exception of primary schools, secondary markets and tarmac roads.

Kilolo district has the second lowest percent of households with no toilet facilities and it has a moderate percent of households owning mobile phones and vehicles. There are no households in the district owning landline phones. The most common source of energy for lighting is the hurricane lamp and most of the households use firewood for cooking. The district has the highest percent of households with grass roofing, however 40 percent of households have iron sheet roofing. The most common source of drinking water is from surface water (lake/dam/river/stream), followed by piped water and unprotected wells. It has the fourth highest percent of households having 2 meals per day compared to other districts and the third highest percent with 3 meals per day. The district has the lowest percent of households that did not eat meat during the week prior to enumeration; however it has the third lowest percent of households that did not eat fish during the respective period. Most households seldom have problems with food satisfaction.

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TYPE OF AGRICULTURE HOUSEHOLDS

2. 1 TYPE OF AGRICULTURE HouseHolds: Number of Agriculture Households by type of Holding by District during 2002/03 Agriculture year

District	Rural households involved in Agriculture	% of Total rural households	Rural households NOT involved in Agriculture	% of Total Rural households	Total Rural Households	% of Total households	Urban Households	% of Total households	Total Number of Households (from 2002 Pop. Census)
	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	52,714	97	1,894	3	54,608	22	191,015	78	245,623
Mufindi	56,766	100	29	0	56,795	20	226,237	80	283,032
Njombe	78,772	98	1,891	2	80,663	19	339,685	81	420,348
Ludewa	24,527	99	247	1	24,774	19	103,746	81	128,520
Makete	25,227	97	751	3	25,978	24	80,083	76	106,061
Iringa Urban	1,162	51	1,115	49	2,277	2	104,391	98	106,668
Kilolo	39,549	98	865	2	40,414	20	164,667	80	205,081
Total	278,717	98	6,792	2	285,509	19	1,209,824	81	1,495,333

2. 2 TYPE OF AGRICULTURE HouseHolds: Number of Agriculture Households by type of Holding by District during 2002/03 Agriculture year

Region	Crops Only		Crops & Livestock		Total Number of Agriculture Households	Total Number of Households Growing Crops	Total Number of Households Rearing Livestock
	Number of households	%	Number of households	%			
Iringa Rural	45,984	22	6,730	9	52,714	45,984	6,730
Mufindi	42,924	21	13,842	19	56,766	42,924	13,842
Njombe	50,557	25	28,215	39	78,772	50,557	28,215
Ludewa	16,228	8	8,299	11	24,527	16,228	8,299
Makete	17,350	8	7,877	11	25,227	17,350	7,877
Iringa Urban	1,085	1	78	0	1,162	1,085	78
Kilolo	31,776	15	7,774	11	39,549	31,776	7,774
Total	205,903	100	72,814	100	278,717	205,903	72,814

NUMBER OF AGRICULTURE HOUSEHOLDS

3.0 Number of Agricultural Households and Average Household Size by Sex of the Head of Household and District, 2002/03 Agricultural year

District	Male			Female			Total		Average Hh Size
	Number	%	Average Hh Size	Number	%	Average Hh Size	Number	%	
Iringa Rural	36,340	69	5	16,374	31	4	52,714	100	4
Mufindi	35,416	62	5	21,350	38	4	56,766	100	5
Makete	56,993	72	5	21,779	28	3	78,772	100	4
Njombe	18,165	74	5	6,362	26	4	24,527	100	5
Ludewa	16,752	66	4	8,475	34	3	25,227	100	4
Iringa Urban	866	74	4	297	26	2	1,162	100	4
Kilolo	29,071	74	5	10,478	26	4	39,549	100	5
Total	193,603	69	5	85,114	31	4	278,717	100	4

3.1 The Livelihood Activities/Source of Income of the Households Ranked in Order of Importance by District

District	Livelihood Activity						
	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Iringa Rur	1	6	4	2	5	7	3
Mufindi	1	5	4	2	6	7	3
Njombe	1	6	4	2	5	7	3
Ludewa	1	5	3	4	6	7	2
Makete	1	6	3	4	5	7	2
Iringa Urb	1	6	5	2	4	7	3
Kilolo	1	5	4	2	6	7	3
Total	1	5	4	2	6	7	3

RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES

3.1a RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: First Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Iringa Rural	37,052	120	686	11,048	2,146	113	947
Mufindi	44,127	757	1,019	9,735	882	129	123
Njombe	45,228	1,459	1,962	23,132	4,753	133	2,912
Ludewa	18,716	1,516	543	2,363	243	906	241
Makete	23,366	126	244	1,307	368	0	60
Iringa Urban	854	0	0	271	0	0	0
Kilolo	36,717	0	96	2,250	294	0	0
Total	206,060	3,978	4,550	50,105	8,685	1,281	4,284

3.1b RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Second Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Iringa Rural	14,132	947	4,406	23,219	2,024	0	7,507
Mufindi	11,016	2,670	11,010	22,100	1,747	0	7,343
Njombe	28,033	1,060	17,756	18,119	4,081	0	9,084
Ludewa	3,748	4,353	6,663	6,247	483	668	2,239
Makete	1,798	1,333	6,802	4,739	1,531	126	8,026
Iringa Urban	244	0	40	707	38	0	92
Kilolo	1,963	5,635	8,927	17,557	1,471	0	3,912
Total	60,935	15,998	55,604	92,688	11,376	794	38,204

3.1c RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Third Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Iringa Rural	1,166	831	5,074	7,813	4,165	418	28,246
Mufindi	1,120	2,288	14,773	7,695	4,217	129	20,906
Njombe	3,959	2,719	17,050	8,946	4,876	133	30,444
Ludewa	1,026	3,572	5,816	4,072	1,268	179	7,689
Makete	63	1,388	5,533	3,701	1,389	0	7,509
Iringa Urban	13	26	26	93	53	0	862
Kilolo	677	3,477	5,907	6,719	1,573	288	16,465
Total	8,025	14,301	54,180	39,038	17,541	1,147	112,122

3.1d RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Fourth Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Iringa Rural	121	2,626	7,824	2,321	2,040	597	8,837
Mufindi	0	2,146	11,036	5,087	1,645	129	16,465
Njombe	793	5,638	10,484	3,952	3,788	398	18,919
Ludewa	181	2,975	4,116	2,779	608	543	8,252
Makete	0	1,074	1,911	1,804	801	253	2,341
Iringa Urban	12	12	26	13	51	12	143
Kilolo	192	4,151	5,770	2,608	1,745	198	6,839
Total	1,301	18,622	41,168	18,564	10,679	2,130	61,795

3.1e RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Fifth Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Iringa Rural	120	1,793	1,194	591	840	241	1,917
Mufindi	127	2,623	2,873	879	1,395	514	2,409
Njombe	132	5,280	3,015	1,449	1,171	132	4,139
Ludewa	122	2,071	1,454	1,083	664	176	3,220
Makete	0	370	128	495	128	62	381
Iringa Urban	0	0	12	0	0	0	13
Kilolo	0	1,444	1,263	673	388	0	1,087
Total	502	13,581	9,938	5,170	4,586	1,125	13,166

3.1f RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Sixth Most Importance

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Iringa Rural	0	0	118	120	0	0	118
Mufindi	0	381	0	129	248	0	0
Njombe	250	1052	0	131	794	0	656
Ludewa	122	181	181	120	242	0	661
Kilolo	0	0	96	198	96	96	100
Total	372	1613	395	698	1379	96	1534

3.1g RANK OF IMPORTANCE OF LIVELIHOOD ACTIVITIES: Seventh Most

District	Annual Crop Farming	Permanent Crop Farming	Livestock Keeping / Herding	Off Farm Income	Remittances	Fishing / Hunting & Gathering	Tree / Forest Resources
Mufindi	118	128	0	0	0	0	0
Njombe	127	0	0	0	0	0	0
Ludewa	0	0	61	0	0	61	120
Makete	0	0	0	0	0	0	63
Total	245	128	61	0	0	61	183

HOUSEHOLDS DEMOGRAPHYS

3.2 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Sex and Age Group, 2002/03 Agricultural Year (row %)

Age Group	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Less than 4	71,278	48	77,136	52	148,414	100
05 - 09	95,069	49	98,928	51	193,996	100
10 - 14	99,365	51	97,351	49	196,716	100
15 - 19	71,325	52	65,533	48	136,857	100
20 - 24	40,303	46	48,125	54	88,428	100
25 - 29	35,184	38	56,410	62	91,594	100
30 - 34	34,513	45	41,892	55	76,405	100
35 - 39	31,747	44	41,060	56	72,807	100
40 - 44	26,102	48	27,844	52	53,946	100
45 - 49	20,737	47	22,950	53	43,687	100
50 - 54	15,872	45	19,114	55	34,987	100
55 - 59	12,623	44	15,766	56	28,388	100
60 - 64	10,876	47	12,027	53	22,903	100
65 - 69	9,244	46	10,878	54	20,121	100
70 - 74	6,677	55	5,354	45	12,030	100
75 - 79	3,286	59	2,258	41	5,544	100
80 - 84	2,440	53	2,197	47	4,637	100
Above 85	1,999	55	1,663	45	3,662	100
Total	588,637	48	646,485	52	1,235,122	100

3.3 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Sex and Age Group, 2002/03 Agricultural Year (col %)

Age Group	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Less than 4	71,278	12	77,136	12	148,414	12
05 - 09	95,069	16	98,928	15	193,996	16
10 - 14	99,365	17	97,351	15	196,716	16
15 - 19	71,325	12	65,533	10	136,857	11
20 - 24	40,303	7	48,125	7	88,428	7
25 - 29	35,184	6	56,410	9	91,594	7
30 - 34	34,513	6	41,892	6	76,405	6
35 - 39	31,747	5	41,060	6	72,807	6
40 - 44	26,102	4	27,844	4	53,946	4
45 - 49	20,737	4	22,950	4	43,687	4
50 - 54	15,872	3	19,114	3	34,987	3
55 - 59	12,623	2	15,766	2	28,388	2
60 - 64	10,876	2	12,027	2	22,903	2
65 - 69	9,244	2	10,878	2	20,121	2
70 - 74	6,677	1	5,354	1	12,030	1
75 - 79	3,286	1	2,258	0	5,544	0
80 - 84	2,440	0	2,197	0	4,637	0
Above 85	1,999	0	1,663	0	3,662	0
Total	588,637	100	646,485	100	1,235,122	100

3.4 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Sex and District, 2002/03 Agricultural Year

District	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Iringa rural	107,245	47	121,387	53	228,633	100
Mufindi	130,454	48	142,931	52	273,385	100
Njombe	155,241	47	177,451	53	332,693	100
Ludewa	55,635	48	60,069	52	115,704	100
Makete	42,819	48	47,302	52	90,121	100
Iringa urban	1,982	46	2,287	54	4,269	100
Kilolo	95,261	50	95,057	50	190,318	100
Total	588,637	48	646,485	52	1,235,122	100

3.5 HOUSEHOLDS DEMOGRAPHYS: Number of Agriculture Household Members 5 years and above Who Can Read and Write Languages By Type of Language and District, 2002/03 Agricultural Year

District	Read & Write									
	Swahili		Swahili & English		Any Other Language		Don't Read / Write		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Iringa Rur	129,297	65	14,165	7	0	0.0	56,570	28	200,032	100
Mufindi	159,232	67	28,959	12	0	0.0	48,088	20	236,279	100
Njombe	218,894	73	7,092	2	0	0.0	73,819	25	299,805	100
Ludewa	74,563	75	3,500	4	61	0.1	21,090	21	99,215	100
Makete	49,435	60	7,111	9	0	0.0	25,630	31	82,176	100
Iringa urban	2,868	74	170	4	0	0.0	831	21	3,869	100
Kilolo	121,284	73	5,398	3	98	0.1	38,553	23	165,333	100
Total	755,574	70	66,396	6	160	0.0	264,579	24	1,086,708	100

3.6 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members 5 years and above By School Attendancy and District , 2002/03 Agricultural Year

District	School Attendancy							
	Attending School		Completed		Never Attended to School		Total	
	Number	%	Number	%	Number	%	Number	%
Iringa Rur	63,964	32	88,031	44	48,036	24	200,032	100
Mufindi	89,708	38	101,894	43	44,677	19	236,279	100
Njombe	97,988	33	139,004	46	62,814	21	299,805	100
Ludewa	34,322	35	47,419	48	17,473	18	99,215	100
Makete	23,196	28	34,678	42	24,301	30	82,176	100
Iringa Urban	1,084	28	2,004	52	780	20	3,869	100
Kilolo	59,741	36	74,101	45	31,491	19	165,333	100
Total	370,004	34	487,132	45	229,572	21	1,086,708	100

3.7 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Main Activity and District

District	Main Activity									
	Crop/Seaweed Farming		Livestock Keeping / Herding		Livestock Pastoralist		Fishing			
	Number	%	Number	%	Number	%	Number	%	%	%
Iringa Rur	89,546	45	588	0	467	0	411	0	1	6
Mufindi	97,646	41	1,118	0	0	0	257	0	2	5
Njombe	154,793	52	1,843	1	133	0	133	0	1	2
Ludewa	50,178	51	545	1	60	0	1,028	1	1	1
Makete	48,375	59	438	1	0	0	128	0	1	2
Iringa urban	1,095	28	26	1	13	0	0	0	1	3
Kilolo	89,458	54	193	0	96	0	305	0	0	1
Total	531,092	49	4,750	0	769	0	2,261	0	1	3

cont...HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Main Activity and District,

District	Self Employed (Non Farming) without Employees		Unpaid Family Helper (Non Agriculture)		Not Working & Available		Not Working & Unavailable		Housemaker / Housewife	
	Number	%	Number	%	Number	%	Number	%	Number	%
Iringa Rural	9,497	5	1,320	1	361	0	0	0	354	0
Mufindi	4,043	2	2,482	1	1,122	0	257	0	2,677	1
Njombe	9,233	3	1,174	0	794	0	132	0	650	0
Ludewa	910	1	241	0	118	0	61	0	1,154	1
Makete	1,017	1	189	0	186	0	126	0	315	0
Iringa urban	814	21	371	10	0	0	0	0	38	1
Kilolo	1,553	1	484	0	96	0	204	0	288	0
Total	27,066	2	6,261	1	2,678	0	780	0	5,477	1

cont....HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Main Activity and District,

District	Student		Old / Retired / Sick / Disabled		Other		Total	
	Number	%	Number	%	Number	%	Number	%
Iringa Rural	60,716	30	20,619	10	169	0	200,032	100
Mufindi	84,289	36	19,994	8	757	0	236,279	100
Njombe	91,431	30	23,207	8	6,214	2	299,805	100
Ludewa	32,682	33	8,375	8	1,457	1	99,215	100
Makete	22,088	27	6,243	8	382	0	82,176	100
Iringa urban	993	26	259	7	77	2	3,869	100
Kilolo	56,433	34	10,910	7	2,317	1	165,333	100
Total	348,633	32	89,607	8	11,375	1	1,086,708	100

3.8 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Level of involvement in Farming Activity and District, 2002/03 Agricultural Year

District	Involvement in Farming									
	Works Full-time on Farm		Works Part-time on Farm		Rarely Works on Farm		Never Works on Farm		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Iringa Rural	71,670	36	17,977	9	62,151	31	48,234	24	200,032	100
Mufindi	87,300	37	22,334	9	88,795	38	37,849	16	236,279	100
Njombe	141,690	47	8,881	3	91,925	31	57,309	19	299,805	100
Ludewa	50,000	50	2,662	3	26,958	27	19,594	20	99,215	100
Makete	47,999	58	2,126	3	15,820	19	16,231	20	82,176	100
Iringa urban	807	21	104	3	1,820	47	1,138	29	3,869	100
Kilolo	62,138	38	8,229	5	58,901	36	36,065	22	165,333	100
Total	461,604	42	62,313	6	346,371	32	216,420	20	1,086,708	100

3.9 HOUSEHOLDS DEMOGRAPHY: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

District	Education Level									
	Under Standard One		Standard One		Standard Two		Standard Three			
	Number	%	Number	%	Number	%	Number	%	%	%
Iringa Rural	596	1	594	1	1193	1	2139	2	3	3
Mufindi	512	1	752	1	1271	1	1905	2	1	1
Njombe	522	0	1441	1	3910	3	2739	2	1	1
Ludewa	299	1	120	0	1092	2	790	2	1	3
Makete	122	0	183	1	936	3	690	2	1	2
Iringa Urban	0	0	26	1	39	2	39	2	1	1
Kilolo	192	0	295	0	1082	1	1261	2	1	3
Total	2243	0	3411	1	9522	2	9561	2	2	2

cont... HOUSEHOLDS DEMOGRAPHY: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

District	Standard Seven		Standard Eight		Training After Primary Education		Pre Form One		Form One	
	Number	%	Number	%	Number	%	Number	%	Number	%
Iringa Rural	62,672	71	359	0	1,072	1	0	0	0	0
Mufindi	75,326	74	750	1	1,330	1	129	0	129	0
Njombe	103,152	74	1,005	1	2,326	2	133	0	0	0
Ludewa	34,764	73	481	1	303	1	61	0	182	0
Makete	26,661	77	805	2	0	0	0	0	0	0
Iringa Urban	1,371	68	39	2	26	1	0	0	40	2
Kilolo	56,912	77	192	0	487	1	0	0	192	0
Total	360,857	74	3,631	1	5,544	1	323	0	542	0

cont... HOUSEHOLDS DEMOGRAPHY: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

District	Form Two		Form Three		Form Four		Form Six		Secondary	
	Number	%	Number	%	Number	%	Number	%	Number	%
Iringa Rural	479	1	0	0	2,231	3	0	0	0	0
Mufindi	1,356	1	381	0	2,764	3	240	0	1,710	2
Njombe	263	0	264	0	1,322	1	0	0	649	0
Ludewa	122	0	122	0	663	1	60	0	241	1
Makete	248	1	124	0	805	2	60	0	238	1
Iringa Urban	12	1	12	1	26	1	0	0	13	1
Kilolo	773	1	198	0	778	1	0	0	0	0
Total	3,254	1	1,101	0	8,588	2	360	0	2,852	1

cont... HOUSEHOLDS DEMOGRAPHY: Number of Agricultural Household Members By Level of Formal Education Completion and District, 2002/03 Agricultural Year

District	Tertiary Education		Adult Education		Total	
	Number	%	Number	%	Number	%
Iringa Rural	0	0	2,290	3	88,031	100
Mufindi	0	0	2,960	3	101,894	100
Njombe	133	0	4,978	4	139,004	100
Ludewa	0	0	607	1	47,419	100
Makete	0	0	483	1	34,678	100
Iringa Urban	0	0	128	6	2,004	100
Kilolo	0	0	1,160	2	74,101	100
Total	133	0	12,606	3	487,132	100

3.10 HOUSEHOLD DEMOGRAPHICS: Number of Agricultural Households and Average Household Size by Sex of the Head of Household and District, 2002/03 Agricultural Year

District	Male Head			Female Head			Total		
	Number	%	Average Household Size	Number	%	Average Household Size	Number	%	Average Household Size
Iringa Rural	36,340	69	5	16,374	31	4	52,714	100	4
Mufindi	35,416	62	5	21,350	38	4	56,766	100	5
Makete	56,993	72	5	21,779	28	3	78,772	100	4
Njombe	18,165	74	5	6,362	26	4	24,527	100	5
Ludewa	16,752	66	4	8,475	34	3	25,227	100	4
Iringa Urban	866	74	4	297	26	2	1,162	100	4
Kilolo	29,071	74	5	10,478	26	4	39,549	100	5
Total	193,603	69	5	85,114	31	4	278,717	100	4

3.11 HOUSEHOLD DEMOGRAPHICS: Number of Agricultural Households Involved in Off Farm Income Generating Activity By Number of Off Farm Income Activities and District, 2002/03 Agricultural Year

District	Off farm income							
	One		Two		More than Two		Total	
	Number	%	Number	%	Number	%	Number	%
Iringa Rural	26,138	56	14,559	31	5,661	12	46,357	100
Mufindi	28,599	62	12,870	28	4,360	10	45,829	100
Njombe	35,743	62	16,617	29	4,953	9	57,312	100
Ludewa	11,081	65	4,972	29	967	6	17,021	100
Makete	8,785	65	4,223	31	565	4	13,573	100
Iringa Urban	464	40	517	45	169	15	1,150	100
Kilolo	18,509	61	9,035	30	3,037	10	30,582	100
Total	129,318	61	62,793	30	19,712	9	211,823	100

3.12 HOUSEHOLDS DEMOGRAPHICS: Number of Heads of Agricultural Households By Maximum Education Level Attained and District, 2002/03 Agricultural Year

District	Maximum Education Level Attained							Total
	No Education	Primary Education	Post Primary Education	Secondary Education	Post Secondary Education	University & Equivalent Education	Adult Education	
Iringa Rural	16,484	31,834	711	1,886	0	113	1,686	52,714
Mufindi	15,191	34,634	723	2,763	1,472	0	1,983	56,766
Njombe	18,799	52,772	1,293	1,054	649	133	4,072	78,772
Ludewa	3,817	19,498	181	546	241	0	243	24,527
Makete	10,744	13,190	0	866	123	0	303	25,227
Iringa Urban	299	736	26	38	0	0	64	1,162
Kilolo	9,207	28,317	192	872	96	0	865	39,549
Total	74,540	180,981	3,126	8,025	2,582	246	9,216	278,717

3.13 HOUSEHOLDS DEMOGRAPHICS: Mean, Median, Mode of Age of Head of Agricultural Household and District

District	Male			Female			Total		
	Mean	Median	Mode	Mean	Median	Mode	Mean	Median	Mode
Iringa Rural	43	39	35	48	49	50	44	40	30
Mufindi	42	40	40	46	45	40	44	40	40
Njombe	43	40	30	45	42	40	44	40	40
Ludewa	42	39	28	43	42	36	42	40	45
Makete	47	45	70	49	48	65	48	45	65
Iringa Urban	47	43	35	46	40	70	47	41	35
Kilolo	43	40	32	44	40	42	44	40	42
Total	43	40	30	46	44	40	44	41	40

3.14 Time Series of Male and Female Headed Households

Type of Holding	NSCA 1994/95	EAS 1995/96	EAS 1996/97	IAS 1997/98	DIAS 1998/99	NSCA 2002/03
Male Headed (Number in Thousands)	3210	3351	3553	3,814	3728	194
Female Headed (Number in Thousands)	662	795	825	896	892	85
Total	3872	4146	4378	4,710	4620	279
Male Headed (Percentage)	83	81	81	81	81	69
Female Headed (Percentage)	17	19	19	19	19	31
Total	100	100	100	100	100	100

3.15 Literacy Rate of Heads of Households By District

District	Literacy								
	Know			Don't know			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Iringa Rural	30,033	6,909	36,942	6,307	9,464	15,771	36,340	16,374	52,714
Mufindi	31,369	10,954	42,323	4,047	10,396	14,443	35,416	21,350	56,766
Njombe	49,615	11,153	60,768	7,378	10,626	18,004	56,993	21,779	78,772
Ludewa	16,586	4,426	21,012	1,579	1,937	3,515	18,165	6,362	24,527
Makete	11,811	3,296	15,107	4,941	5,179	10,120	16,752	8,475	25,227
Iringa Urban	710	154	864	156	143	299	866	297	1,162
Kilolo	25,150	5,866	31,016	3,920	4,612	8,533	29,071	10,478	39,549
Total	165,274	42,758	208,032	28,328	42,356	70,685	193,603	85,114	278,717

LAND ACCESS/OWNERSHIP

4.1 LAND ACCESS/OWNERSHIP: Number of Farming Households By Type of Land Ownership/Tenure and District, 2002/03 Agricultural Year

District	Land Access														Total Number of Households
	Leased/Certificate of Ownership		Owned Under Customary Law		Bought		Rented		Borrowed		Households with Area Shared Cropped		Households with Area under Other Forms of Tenure		
	No. of Households	%	No. of Households	%	No. of Households	%	No. of Households	%	No. of Households	%	No. of Households	%	No. of Households	%	
Iringa Rural	6,195	12	40,156	76	6,401	12	8,590	16	4,932	9	484	1	2,629	5	52,714
Mufindi	4,153	7	45,756	81	14,198	25	7,308	13	7,402	13	3,072	5	4,715	8	56,766
Njombe	5,913	8	64,971	82	14,292	18	10,134	13	6,836	9	2,611	3	8,491	11	78,772
Ludewa	3,945	16	21,070	86	3,077	13	2,369	10	6,164	25	481	2	2,529	10	24,527
Makete	1,845	7	22,230	88	4,943	20	2,870	11	3,241	13	1,068	4	1,385	5	25,227
Iringa Urban	66	6	1,006	87	144	12	166	14	38	3	12	1	13	1	1,162
Kilolo	4,447	11	32,613	82	7,388	19	9,485	24	4,564	12	1,451	4	1,544	4	39,549
Total	26,564	10	227,801	82	50,443	18	40,922	15	33,177	12	9,180	3	21,306	8	278,717

4.2 LAND ACCESS/OWNERSHIP: Area of Land (ha) by Ownership/Tenure (Hectare) and District for the 2002/03 Agricultural Year.

District	Area Leased/Certificate of Ownership	Area Owned Under Customary Law	Area Bought	Area Rented From Others	Area Borrowed	Area Shared Cropped	Area under Other Forms of Tenure	Total
Iringa Rural	16,765	74,818	10,290	7,260	3,893	208	1,766	115,001
Mufindi	7,440	94,027	20,140	6,591	5,959	2,305	10,560	147,022
Njombe	8,062	131,909	23,114	7,883	4,784	1,421	6,507	183,679
Ludewa	5,980	48,005	4,441	1,845	3,902	194	8,082	72,450
Makete	1,386	49,383	5,025	2,964	2,143	342	1,035	62,277
Iringa Urban	134	1,090	199	73	25	5	5	1,532
Kilolo	8,482	72,988	13,963	9,726	2,685	709	1,304	109,858
Total	48,249	472,221	77,172	36,342	23,391	5,184	29,259	691,818
%	7	68	11	5	3	1	4	100

LAND USE

5.1 LAND USE: Area of Land by type of Land Use and District during 2002/03 Agricultural Year

District	Type of Land Use												Total
	Area under Temporary Mono Crops	Area under Temporary Mixed Crops	Area under Permanent Mono Crops	Area under Permanent Mixed Crops	Area under Permanent / Annual Mix	Area under Pasture	Area under Fallow	Area under Natural Bush	Area under Planted Trees	Area Rented to Others	Area Unusable	Area of Uncultivated Usable Land	
Iringa Rural	40,450	32,805	1,016	1,380	3,441	2,269	2,634	3,094	1,290	4,336	4,260	18,050	115,025
Mufindi	41,420	40,001	1,536	2,378	3,865	4,214	227	5,654	7,751	893	7,317	31,766	147,022
Njombe	73,016	34,573	1,226	489	3,226	3,777	7,832	9,742	18,325	2,176	6,607	22,689	183,679
Ludewa	25,787	5,255	3,994	780	1,276	947	3,594	3,633	2,346	2,561	5,432	16,832	72,437
Makete	28,104	7,266	388	439	909	352	5,068	1,299	5,560	288	2,530	10,074	62,277
Iringa Urban	48	1,059	0	18	15		172	0	16	21	11	172	1,532
Kilolo	45,140	23,912	552	1,314	2,982	1,445	9,692	1,944	5,196	2,639	3,161	11,881	109,858
Total	253,966	144,871	8,711	6,800	15,714	13,005	29,220	25,366	40,484	12,913	29,318	111,464	691,830

5.2 LAND USE: Number of Agricultural Households By Type of Land Use and District, 2002/03 Agricultural Year

District	Land Use											
	Households with Area under Temporary Mono Crops	Households with Area under Temporary Mixed Crops	Households with Area under Permanent Mono Crops	Households with Area under Permanent Mixed Crops	Households with Area under Permanent / Annual Mix	Households with Area under Pasture	Households with Area under Fallow	Households with Area under Natural Bush	Households with Area under Planted Trees	Households with Area Rented to Others	Households with Area Unusable	Households with Area of Uncultivated Usable Land
Iringa Rural	34,521	25,345	1,303	1,313	3,358	772	2,430	2,222	2,731	2,494	3,582	15,060
Mufindi	36,847	34,901	2,764	2,771	3,572	2,698	625	2,805	14,943	1,121	4,638	24,470
Njombe	59,010	36,519	4,215	1,589	5,507	4,085	10,306	8,556	29,173	2,751	6,008	22,764
Ludewa	21,798	8,826	8,809	2,173	2,606	969	2,835	2,180	7,500	2,600	4,713	14,358
Makete	23,461	10,738	685	1,461	1,588	633	6,425	2,266	9,332	683	2,359	9,662
Iringa Urban	103	1,137	0	39	26	0	236	0	13	26	26	180
Kilolo	32,589	20,552	2,424	3,464	7,164	1,348	7,850	1,279	10,775	1,756	2,816	9,102
Total	208,330	138,019	20,200	12,809	23,821	10,505	30,706	19,307	74,468	11,432	24,142	95,596

5.3 Number of Agricultural Households by Whether All Land Available to the Household Was Used and District, 2002/03 Agricultural Year

District	Was all Land Available to the Hh Used During 2002/03?				
	Yes		No		Total
	Number	%	Number	%	Number
Iringa Rural	31,240	59	21,473	41	52,714
Mufindi	31,043	55	25,723	45	56,766
Njombe	45,075	57	33,696	43	78,772
Ludewa	5,155	21	19,372	79	24,527
Makete	9,733	39	15,493	61	25,227
Iringa Urban	785	68	378	32	1,162
Kilolo	24,046	61	15,503	39	39,549
Total	147,079	53	131,638	47	278,717

5.4 Number of Agricultural Households by Whether they Consider themselves to have Sufficient Land for the Household and District, 2002/03 Agricultural Year

District	Do you Consider that you have sufficient land for the Hh?				
	Yes		No		Total
	Number	%	Number	%	Number
Iringa Rural	28,970	55	23,744	45	52,714
Mufindi	41,400	73	15,366	27	56,766
Njombe	49,120	62	29,652	38	78,772
Ludewa	17,447	71	7,080	29	24,527
Makete	16,914	67	8,313	33	25,227
Iringa Urban	624	54	539	46	1,162
Kilolo	20,076	51	19,473	49	39,549
Total	174,551	63	104,166	37	278,717

5.5 Number of Agricultural Households by whether Female Members of the Household Own or Have Customary Right to Land and District, 2002/03 Agricultural Year

District	Customary right to land				
	Yes		No		Total
	Number	%	Number	%	Number
Iringa Rural	16,301	31	36,413	69	52,714
Mufindi	9,693	17	47,073	83	56,766
Njombe	21,525	27	57,247	73	78,772
Ludewa	3,700	15	20,827	85	24,527
Makete	9,127	36	16,100	64	25,227
Iringa Urban	206	18	956	82	1,162
Kilolo	14,174	36	25,375	64	39,549
Total	74,726	27	203,990	73	278,717

**TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION
WET & DRY SEASONS**

7.1 & 7.2a ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area (ha) by season and District

District	Dry Season		Wet Season		Total Area Planted (hectare)	% Area planted in Dry season
	Number of Households	Planted Area	Number of Households	Planted Area		
Iringa Rural	0	0	98,946	72,498	72,498	0
Mufindi	0	0	125,485	80,173	80,173	0
Njombe	61	12	217,457	108,870	108,883	0.01
Ludewa	62	13	67,786	37,118	37,131	0.03
Makete	0	0	74,425	35,279	35,279	0
Iringa Urban	0	0	2,676	1,109	1,109	0
Kilolo	0	0	87,174	70,878	70,878	0
Total	123	25	673,948	405,924	405,949	0.01

7.1 & 7.2b ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households Planting Crops By Season and District

District	Dry Season		Wet Season		Total Number of Crop Growing Households
	Households Growing Crops	Households NOT Growing Crops	Number of Households Growing Crops	Number of Households NOT Growing Crops	
Iringa Rural	0	52714	52714	0	52,714
Mufindi	0	56766	56766	0	56,766
Makete	0	78772	78772	0	78,772
Njombe	61	24466	23673	854	24,527
Ludewa	62	25165	25227	0	25,227
Iringa Urban	0	1162	1162	0	1,162
Kilolo	0	39549	39549	0	39,549
Total	123	278593	277863	854	278,717

7.1 & 7.2c: TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Area Planted (ha) and Quantity Harvested by Season and Crop for the 2002/03 Agricultural Year

Crop	Dry Season			Wet Season			Total		
	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)	Area Planted (ha)	Quantity Harvested (tons)	Yield (kg/ha)
CEREALS	12	6	1	280,644	284,945	1	280,656	284,951	
Maize	12	6	1	253,874	265,945	2	253,874	265,951	1
Paddy	0	0	0	4,666	8,099	2	4,666	8,099	2
Sorghum	0	0	0	2,555	1,206	0	2,555	1,206	0
Finger Millet	0	0	0	3,326	1,793	1	3,326	1,793	1
Wheat	0	0	0	16,223	7,901	0	16,223	7,901	0
ROOTS & TUBERS				23,839	81,890		23,839	81,890	
Cassava	0	0	0	4,737	7,124	2	4,737	7,124	2
Sweet Potatoes	0	0	0	649	1,428	2	649	1,428	2
Irish Potatoes	0	0	0	18,178	72,865	4	18,178	72,865	4
Yams	0	0	0	227	413	2	227	413	2
Cocoyam	0	0	0	48	61	1	48	61	1
PULSES	13	5	0	70,483	30,640		70,496	30,640	
Mung Beans	0	0	0	4	0	0	4	0	0
Beans	0	0	0	59,661	23,479	0	59,661	23,479	0
Cowpeas	0	0	0	4,112	934	0	4,112	934	0
Green Gram	0	0	0	89	10	0	89	10	0
Chich Peas	0	0	0	0	0	0	0	0	0
Bambaranuts	0	0	0	848	364	0	848	364	0
Field Peas	13	5	0	5,769	5,851	1	5,769		0
OIL SEEDS & OIL NUTS	0	0	0	24,570	10,473		24,570	10,473	
Sunflower	0	0	0	15,674	7,366	0	15,674	7,366	0
Simsim	0	0	0	1,245	822	1	1,245	822	1
Groundnuts	0	0	0	7,650	2,285	0	7,650	2,285	0
Castor Seed	0	0	0	0	0	0	0	0	0
FRUITS & VEGETABLES	0	0	0	5,625	30,084		5,625	30,084	
Okra	0	0	0	21	10	0	21	10	0
Radish	0	0	0	0	0	0	0	0	0
Bitter Aubergine	0	0	0	0	0	0	0	0	0
Onions	0	0	0	386	1,371	4	386	1,371	4
Ginger	0	0	0	12	13	1	12	13	1
Cabbage	0	0	0	1,380	9,098	7	1,380	9,098	7
Tomatoes	0	0	0	3,274	18,991	6	3,274	18,991	6
Spinnach	0	0	0	154	254	2	154	254	2
Carrot	0	0	0	3	6	2	3	6	2
Chillies	0	0	0	196	101	1	196	101	1
Amaranths	0	0	0	86	145	2	86	145	2
Pumpkins	0	0	0	111	83	1	111	83	1
Cucumber	0	0	0	0	0	0	0	0	0
Egg Plant	0	0	0	1	11	11	1	11	11
Water Mellon	0	0	0	2	1	1	2	1	1
CASH CROPS	0	0	0	396	90		396	90	
Pyrethrum				336	90	0	336	90	0
Cotton				0	0	0	0	0	0
Tobacco				60	0	0	60	0	0
Jute				0	0	0	0	0	0
Total	25			405,556			405,581		

7.1 & 7.2d : TOTAL CROP AND VEGETABLE PRODUCTION: Number of Agricultural Households by Area Planted (ha) and Crop for Agricultural Year 2002/03 - Dry and Wet Seasons, Iringa region.

Crop	Dry Season		Wet Season		Total Area Planted Dry & Wet Seasons	% Area Planted in Dry season
	Number of Households	Area Planted (ha)	Number of Households	Area Planted (ha)		
CEREALS	61	12	331,599	280,644	280,656	0.004
Maize	61	12	271,618	253,874	253,874	0.005
Paddy	0	0	8,760	4,666	4,666	0.000
Sorghum	0	0	5,741	2,555	2,555	0.000
Finger Millet	0	0	9,956	3,326	3,326	0.000
Wheat	0	0	35,524	16,223	16,223	0.000
ROOTS & TUBERS	0	0	61,538	23,839	23,839	0.000
Cassava	0	0	11,204	4,737	4,737	0.000
Sweet Potatoes	0	0	4,534	649	649	0.000
Irish Potatoes	0	0	44,849	18,178	18,178	0.000
Yams	0	0	706	227	227	0.000
Cocoyam	0	0	246	48	48	0.000
PULSES	62	13	199,901	70,483	70,496	0.02
Mung Beans	0	0	12	4	4	0.00
Beans	0	0	165,191	59,661	59,661	0.00
Cowpeas	0	0	13,800	4,112	4,112	0.00
Green Gram	0	0	260	89	89	0.00
Chich Peas	0	0	0	0	0	0.00
Bambaranuts	0	0	1,682	848	848	0.00
Field Peas	62	13	18,955	5,769	5,769	0.23
OIL SEEDS & OIL NUTS			53,071	24,570	24,570	0.0
Sunflower	0	0	37,496	15,674	15,674	0.0
Simsim	0	0	1,575	1,245	1,245	0.0
Groundnuts	0	0	14,001	7,650	7,650	0.0
Castor Seed	0	0	0	0	0	0.0
FRUITS & VEGETABLES	0	0	25,855	5,625	5,625	0.0
Okra	0	0	96	21	21	0.0
Radish	0	0	0	0	0	0.0
Bitter Aubergine	0	0	0	0	0	0.0
Onions	0	0	1,970	386	386	0.0
Ginger	0	0	59	12	12	0.0
Cabbage	0	0	7,478	1,380	1,380	0.0
Tomatoes	0	0	11,796	3,274	3,274	0.0
Spinnach	0	0	2,006	154	154	0.0
Carrot	0	0	60	3	3	0.0
Chillies	0	0	251	196	196	0.0
Amaranths	0	0	974	86	86	0.0
Pumpkins	0	0	1,090	111	111	0.0
Cucumber	0	0	0	0	0	0.0
Egg Plant	0	0	12	1	1	0.0
Water Mellon	0	0	62	2	2	0.0
CASH CROPS	0	0	734	396	396	0.0
Pyrethrum	0	0	618	336	336	0.0
Cotton	0	0	0	0	0	0.0
Tobacco	0	0	116	60	60	0.0
Jute	0	0	0	0	0	0.0
Total				405,556	405,581	0.0

7.1 & 7.2e TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Total number of agriculture Households and Planted Area (ha) By Means of Soil Preparation and District - Wet & Dry Seasons- Iringa Region.

District	Soil Preparation							
	Mostly Tractor Ploughing		Mostly Oxen Ploughing		Mostly Hand Cultivation		Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Iringa Rural	1,878	3,332	13,411	22,347	37,425	46,447	52,714	72,126
Mufindi	1,378	2,482	19,261	33,786	36,127	43,904	56,766	80,173
Makete	1,194	2,175	33,941	50,618	43,637	56,064	78,772	108,857
Njombe	242	369	5,442	8,109	18,050	25,171	23,735	33,649
Ludewa	496	467	250	189	24,544	34,635	25,289	35,291
Iringa Urban	12	15	177	192	973	902	1,162	1,109
Kilolo	793	3,554	13,879	30,433	24,877	36,843	39,549	70,829
Total	5,993	12,394	86,361	145,674	185,510	243,941	277,863	402,009

7.1 & 7.2f TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Total number of agriculture Households and Planted Area (ha) By Fertiliser Use and District for 2002/03 agricultural year Wet & Dry season - Iringa Region.

District	Mostly Farm Yard Manure		Mostly Compost		Mostly Inorganic Fertilizer		No Fertilizer Applied		Total Planted Area
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	
Iringa Rural	7,926	15,164	4,916	6,085	11,520	15,136	28,351	36,113	72,498
Mufindi	11,836	18,607	4,789	9,061	8,962	13,764	31,180	38,740	80,173
Njombe	22,317	35,404	1,980	3,026	32,625	44,411	21,849	26,030	108,870
Ludewa	2,914	4,199	488	530	4,421	6,377	16,705	26,012	37,118
Makete	6,160	9,097	1,246	1,522	5,420	7,894	12,401	16,765	35,279
Iringa Urban	130	178	65	50	398	430	569	451	1,109
Kilolo	5,155	10,939	1,938	3,050	6,236	14,497	26,220	42,392	70,878
Total	56,438	93,587	15,421	23,324	69,582	102,509	137,276	186,503	405,924

7.1 & 7.2g TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Agricultural Households and Planted Area By Irrigation Use and District for the 2002/03 Agricultural - Weta and Dry seasons -Iringa region.

District	Irrigation Use						planted under
	Households Using Irrigation		Households Not Using Irrigation		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Iringa Rural	12,225	14,369	40,489	58,128	52,714	72,498	19.8
Mufindi	5,897	12,344	50,869	67,828	56,766	80,173	15.4
Njombe	23,043	16,435	67,312	92,448	90,354	108,870	15.1
Ludewa	7,658	12,510	16,931	24,620	24,589	37,131	33.7
Makete	187	337	25,040	34,941	25,227	35,279	1.0
Iringa Urban	64	95	1,098	1,014	1,162	1,109	8.6
Kilolo	6,827	11,767	32,723	59,111	39,549	70,878	16.6
Total	44,256	67,833	234,460	338,091	278,717	405,924	16.7
%	16	17	84	83	100.0	100.0	17

Note: Number of households is an over estimated due to double counting of households growing crops in both wet and dry seasons. To compare previous surveys use Number of wet season planters only.

7.1 & 7.2h TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Agriculture Households and Planted Area By Insecticide Use and District for the 2002/03 agricultural year - Wet & Dry Seasons-Iringa region.

District	Insecticide Use						% of Planted Area using Insecticide
	Insecticide Use		Insecticide Use		Total		
	Number of Household Using Insecticide	Planted Area	Number of Household NOT Using Insecticide	Planted Area	Number of Household	Planted Area	
Iringa Rural	17,193	27,815	35,521	44,682	52,714	72,498	38.37
Mufindi	37,340	56,164	19,426	24,009	56,766	80,173	70.05
Njombe	53,474	77,427	25,297	31,468	78,772	108,870	71.12
Ludewa	16,326	27,674	8,263	9,469	24,527	37,118	74.56
Makete	9,193	14,503	16,033	20,776	25,227	35,279	41.11
Iringa Urban	479	562	684	547	1,162	1,109	50.69
Kilolo	20,000	37,127	19,550	33,751	39,549	70,878	52.38
Total	153,943	241,223	124,773	164,701	278,717	405,924	

Note: Number of households is an over estimated due to double counting of households growing crops in both wet and dry seasons. To compare previous surveys use Number of wet season planters only.

7.1 & 7.2i TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Agriculture Households and Planted Area By Herbicide Use and District for the 2002/03 agricultural year - Wet & Dry Seasons-Iringa region.

District	Herbicide Use						% of Planted Area using Herbicide
	Households Using Herbicide		Households Not Using Herbicide		Total		
	Number of Household Using Herbicide	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Iringa Rural	2,386	4,002	50,328	68,496	52,714	72,498	5.52
Mufindi	1,007	1,830	55,759	78,343	56,766	80,173	2.28
Njombe	1,824	1,808	76,948	107,062	78,772	108,870	1.66
Ludewa	545	722	23,982	36,396	24,527	37,118	1.95
Makete	562	673	24,665	34,605	25,227	35,279	1.91
Iringa Urban	39	58	1,123	1,050	1,162	1,109	5.27
Kilolo	1,458	1,811	38,091	69,067	39,549	70,878	2.56
Total	7,820	10,905	270,896	395,019	278,717	405,924	2.69
%	3	3	97	97	100	100	

7.1 & 7.2j TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Agriculture Households and Planted Area By Fungicide Use and District for the 2002/03 agricultural year - Wet & Dry Seasons- Iringa region.

District	Fungicide Use						% of Planted Area using Insecticide
	Fungicide		Fungicide		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Iringa Rural	3,093	5,494	49,620	67,004	52,714	72,498	7.58
Mufindi	1,023	1,491	55,743	78,682	56,766	80,173	1.86
Njombe	8,262	13,564	70,510	95,307	78,772	108,870	12.46
Ludewa	1,032	1,692	23,495	35,426	24,527	37,118	4.56
Makete	366	466	24,861	34,813	25,227	35,279	1.32
Iringa Urban	64	95	1,098	1,014	1,162	1,109	8.57
Kilolo	4,177	9,679	35,372	61,199	39,549	70,878	13.66
Total	18,018	32,481	260,698	373,442	278,717	405,924	8.00

7.1 & 7.2k TOTAL ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Agriculture Households and Planted Area By Improved seed Use and District for the 2002/03 agricultural year - Wet & Dry Seasons- Iringa region.

District	Improved Seed Use						% of Planted Area using Insecticide
	Improved Seed		Improved Seed		Total		
	Number of Household	Planted Area	Number of Household	Planted Area	Number of Household	Planted Area	
Iringa Rural	13,001	20,049	39,712	52,076	52,714	72,126	27.80
Mufindi	9,966	16,923	46,800	63,249	56,766	80,173	21.11
Makete	14,689	24,221	64,082	84,636	78,772	108,857	22.25
Njombe	2,729	7,591	20,944	26,046	23,673	33,637	22.57
Ludewa	3,237	4,749	21,990	30,529	25,227	35,279	13.46
Iringa Urban	91	110	1,071	999	1,162	1,109	9.93
Kilolo	7,338	16,933	32,211	53,897	39,549	70,829	23.91
Total	51,052	90,576	226,811	311,433	277,863	402,009	22.53

**ANNUAL CROP AND VEGETABLE PRODUCTION
DRY SEASONS**

7.1a ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area (ha) By Means Used for Soil Preparation and District During 2002/03 Crop Year-DRY SEASON

District	Soil Preparation			
	Mostly Hand Cultivation		Total	
	Number of Households	Planted Area	Number of Households	Planted Area
Njombe	61	12	61	12
Ludewa	62	13	62	13
Total	123	25	123	25

7.1b ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Fertilizer Use and District During 2002/03 Crop Year-DRY SEASON

District	Fertilizer Use			
	No Fertilizer Applied		Total	
	Number of Households	Planted Area	Number of Households	Planted Area
Njombe	61	12	61	12
Ludewa	62	13	62	13
Total	123	25	123	25

7.1c ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Irrigation Use and District During 2002/03 Crop Year DRY SEASON

District	Irrigation Use			
	Households Not Using Irrigation		Total	
	Number of Household	Planted Area	Number of Household	Planted Area
Njombe	61	12	61	12
Ludewa	62	13	62	13
Total	123	25	123	25

**ANNUAL CROP AND VEGETABLES PRODUCTION
WET SEASONS**

7.2a ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Households and Planted Area (ha) By Means Used for Soil Preparation and District During 2002/03 Crop Year- WET SEASON

District	Soil Preparation							
	Mostly Tractor		Mostly Oxen Ploughing		Mostly Hand Cultivation		Total	
	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area	Number of Households	Planted Area
Iringa Rural	1,878	3,332	13,411	22,347	37,425	46,447	52,714	72,126
Mufindi	1,378	2,482	19,261	33,786	36,127	43,904	56,766	80,173
Makete	1,194	2,175	33,941	50,618	43,637	56,064	78,772	108,857
Njombe	242	369	5,442	8,109	17,989	25,159	23,673	33,637
Ludewa	496	467	250	189	24,482	34,622	25,227	35,279
Iringa Urban	12	15	177	192	973	902	1,162	1,109
Kilolo	793	3,554	13,879	30,433	24,877	36,843	39,549	70,829
Total	5,993	12,394	86,361	145,674	185,510	243,941	277,863	402,009
%	2	3	31	36	67	61	100	100

7.2b ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Fertilizer Use and District During 2002/03 Crop Year-WET SEASON

District	Fertilizer Use									
	Mostly Farm Yard Manure		Mostly Compost		Mostly Inorganic Fertilizer		No Fertilizer Applied		Total	
	No. of H/holds	Planted Area	No. of H/holds	Planted Area	No. of H/holds	Planted Area	No. of H/holds	Planted Area	No. of H/holds	Planted Area
Iringa Rural	7,926	15,164	4,916	6,085	11,520	15,136	28,351	36,113	52,714	72,498
Mufindi	11,836	18,607	4,789	9,061	8,962	13,764	31,180	38,740	56,766	80,173
Njombe	22,317	35,404	1,980	3,026	32,625	44,411	21,849	26,030	78,772	108,870
Ludewa	2,914	4,199	488	530	4,421	6,377	16,705	26,012	24,527	37,118
Makete	6,160	9,097	1,246	1,522	5,420	7,894	12,401	16,765	25,227	35,279
Iringa Urban	130	178	65	50	398	430	569	451	1,162	1,109
Kilolo	5,155	10,939	1,938	3,050	6,236	14,497	26,220	42,392	39,549	70,878
Total	56,438	93,587	15,421	23,324	69,582	102,509	137,276	186,503	278,717	405,924

7.2c ANNUAL CROP AND VEGETABLE PRODUCTION: Number of Crop Growing Households and Planted Area By Irrigation Use and District During 2002/03 Crop Year LONG RAINY SEASON

District	Irrigation Use					
	Irrigation		Irrigation		Total	
	No. of H/holds	Planted Area	No. of H/holds	Planted Area	No. of H/holds	Planted Area
Iringa Rural	12,225	14,369	40,489	58,128	52,714	72,498
Mufindi	5,897	12,344	50,869	67,828	56,766	80,173
Njombe	11,460	16,423	67,312	92,448	78,772	108,870
Ludewa	7,596	12,498	16,931	24,620	24,527	37,118
Makete	187	337	25,040	34,941	25,227	35,279
Iringa Urban	64	95	1,098	1,014	1,162	1,109
Kilolo	6,827	11,767	32,723	59,111	39,549	70,878
Total	44,256	67,833	234,460	338,091	278,717	405,924

7.1.1 Number of Crop Growing Households, Planted Area (ha) and Maize Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Maize										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	48,283	50,332	31,562	0.63	50,332	50,332	1.00
Mufindi	0	0	0	0	56,766	55,370	58,915	1.06	55,370	55,370	1.00
Njombe	61	12	6	0.5	78,507	61,801	87,994	1.42	61,814	88,000	1.42
Ludewa	61	12	6	0.5	23,067	20,710	30,041	1.45	20,723	30,047	1.45
Makete	0	0	0	0	24,672	16,476	14,975	0.91	16,476	16,476	1.00
Iringa Urban	0	0	0	0	1,162	728	602	0.83	728	728	1.00
Kilolo	0	0	0	0	39,161	48,457	41,856	0.86	48,457	48,457	1.00
Total	122	25	12		271,618	253,874	265,945	1.05	253,899	289,410	1.14

7.2.2 Number of Crop Growing Households, Planted Area (ha) and Paddy Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Paddy										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0.0	6,466	3,745	7,112	1.90	3,745	7,112	1.90
Mufindi	0	0	0	0.0	129	104	275	2.64	104	275	2.64
Njombe	0	0	0	0.0	396	174	80	0.46	174	80	0.46
Ludewa	0	0	0	0.0	1,336	339	337	0.99	339	337	0.99
Makete	0	0	0	0.0	433	304	295	0.97	304	295	0.97
Iringa Urban	0	0	0	0.0	0	0	0	0.00	0	0	0.00
Kilolo	0	0	0	0.0	0	0	0	0.00	0	0	0.00
Total					8,760	4,666	8,099	1.74	4,666	8,099	1.74

7.2.3 Number of Crop Growing Households, Planted Area (ha) and Sorghum Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Sorghum										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	2,078	1,438	619	0.43	1,438	619	0.43
Mufindi	0	0	0	0	0	0	0	0	0	0	0.00
Njombe	0	0	0	0.0	789	165	21	0.13	165	21	0.13
Ludewa	0	0	0	0.0	609	194	58	0.30	194	58	0.30
Makete	0	0	0	0.0	2,170	739	508	0.69	739	508	0.69
Iringa Urban	0	0	0	0.0	0	0	0	0.0	0	0	0.00
Kilolo	0	0	0	0.0	96	19	0	0.00	19	0	0.00
Total	0	0	0	0.0	5,741	2,555	1,206		2,555	1,206	0.47

7.2.4 Number of Crop Growing Households, Planted Area (ha) and Finger Millet Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Finger Millet										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0.0	241	86	35	0.40	86	35	0.40
Mufindi	0	0	0	0.0	0	0	0	0.0	0	0	0.0
Njombe	0	0	0	0.0	0	0	0	0.0	0	0	0.0
Ludewa	0	0	0	0.0	0	0	0	0.0	0	0	0.0
Makete	0	0	0	0.0	0	0	0	0.0	0	0	0.0
Iringa Urban	0	0	0	0.0	0	0	0	0.0	0	0	0.0
Kilolo	0	0	0	0.0	0	0	0	0.0	0	0	0.0
Total	0	0	0	0.0	241	86	35	0.40	86	35	0.40

7.2.5 Number of Crop Growing Households, Planted Area (ha) and Wheat Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Wheat										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	120	97	7	0.07	97	7	0.07
Mufindi	0	0	0	0	4,946	1,954	1,140	0.58	1,954	1,140	0.58
Njombe	0	0	0	0	11,392	4,244	1,784	0.42	4,244	1,784	0.42
Ludewa	0	0	0	0	4,065	1,440	653	0.45	1,440	653	0.45
Makete	0	0	0	0	14,519	7,923	3,587	0.45	7,923	3,587	0.45
Iringa Urban	0	0	0	0	0	0	0	0	0	0	0
Kilolo	0	0	0	0	481	564	730	1.29	564	730	1.29
Total	0	0	0	0	35,524	16,223	7,901	0.49	16,223	7,901	0.49

7.2.6 Number of Crop Growing Households, Planted Area (ha) and Cassava Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Cassava										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	1,067	413	167	0.41	413	167	0.41
Mufindi	0	0	0	0	626	222	279	1.26	222	279	1.26
Njombe	0	0	0	0	2,250	394	1,003	2.55	394	1,003	2.55
Ludewa	0	0	0	0	6,743	3,605	5,611	1.56	3,605	5,611	1.56
Makete	0	0	0	0	0	0	0	0.00	0	0	0.00
Iringa Urban	0	0	0	0	26	4	8	1.94	4	8	1.94
Kilolo	0	0	0	0	491	99	56	0.56	99	56	0.56
Total	0	0	0	0	11,204	4,737	7,124	1.50	4,737	7,124	1.50

7.2.7 Number of Crop Growing Households, Planted Area (ha) and Sweet Potatoes Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Sweet Potatoes										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	121	12	12	0.95	12	12	0.95
Mufindi	0	0	0	0	513	65	82	1.26	65	82	1.26
Njombe	0	0	0	0	1,190	155	441	2.84	155	441	2.84
Ludewa	0	0	0	0	843	140	146	1.04	140	146	1.04
Makete	0	0	0	0	691	109	465	4.26	109	465	4.26
Iringa Urban	0	0	0	0	13	1	1	0.99	1	1	0.99
Kilolo	0	0	0	0	1,162	166	282	1.69	166	282	1.69
Total	0	0	0	0	4,534	649	1,428	2.20	649	1,428	2.20

7.2.8 Number of Crop Growing Households, Planted Area (ha) and Irish Potatoes Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Irish Potatoes										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	473	60	267	4.44	60	267	4.44
Mufindi	0	0	0	0	3,823	1,051	2,136	2.03	1,051	2,136	2.03
Njombe	0	0	0	0	20,560	9,981	51,188	5.13	9,981	51,188	5.13
Ludewa	0	0	0	0	2,665	614	1,723	2.81	614	1,723	2.81
Makete	0	0	0	0	14,513	5,579	15,011	2.69	5,579	15,011	2.69
Iringa Urban	0	0	0	0	0	0	0	0.00	0	0	0.00
Kilolo	0	0	0	0	2,815	893	2,541	2.84	893	2,541	2.84
Total	0	0	0	0	44,849	18,178	72,865	4.01	18,178	72,865	4.01

7.2.9 Number of Crop Growing Households, Planted Area (ha) and Yams Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Yams										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0	0	0	0	0	0	0
Mufindi	0	0	0	0	0	0	0	0	0	0	0
Njombe	0	0	0	0	396	134	364	2.71	134	364	2.71
Ludewa	0	0	0	0	61	12	9	0.72	12	9	0.72
Makete	0	0	0	0	249	81	40	0.50	81	40	0.50
Iringa Urban	0	0	0	0	0	.	.	0.00	.	.	0.00
Kilolo	0	0	0	0	0	.	.	0.00	.	.	0.00
Total	0	0	0	0	706	227	413	1.82	227	413	1.82

7.2.10 Number of Crop Growing Households, Planted Area (ha) and Cocoyams Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Cocoyams										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0
Mufindi	0	0	0	0	129	13	8	0.59	13	8	0.59
Njombe	0	0	0	0	0	.	.	0.00	.	.	0.00
Ludewa	0	0	0	0	0	.	.	0.00	.	.	0.00
Makete	0	0	0	0	117	35	53	1.54	35	53	1.54
Iringa Urban	0	0	0	0	0	.	.	0.00	.	.	0.00
Kilolo	0	0	0	0	0	.	.	0.00	.	.	0.00
Total	0	0	0	0	246	48	61	1.28	48	61	1.28

7.2.11 Number of Crop Growing Households, Planted Area (ha) and Mug beans Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Mug beans										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0
Mufindi	0	0	0	0	0
Njombe	0	0	0	0	0
Ludewa	0	0	0	0	0
Makete	0	0	0	0	0
Iringa Urban	0	0	0	0	12.5	3.8	0.5	0.13	3.8	0.5	0.13
Kilolo	0	0	0	0	0.0
Total	0	0	0	0	12.5	3.8	0.5	0.13	3.8	0.5	0.13

7.2.12 Number of Crop Growing Households, Planted Area (ha) and Beans Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Beans										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	22,501	8,336	2,322	0.28	8,336	2,322	0.28
Mufindi	0	0	0	0	40,234	14,151	4,968	0.35	14,151	4,968	0.35
Njombe	0	0	0	0	51,531	16,569	6,458	0.39	16,569	6,458	0.39
Ludewa	0	0	0	0	15,487	7,523	3,473	0.46	7,523	3,473	0.46
Makete	0	0	0	0	11,551	2,868	1,277	0.45	2,868	1,277	0.45
Iringa Urban	0	0	0	0	1,072	294	77	0.26	294	77	0.26
Kilolo	0	0	0	0	22,815	9,920	4,905	0.49	9,920	4,905	0.49
Total	0	0	0	0	165,191	59,661	23,479	0.39	59,661	23,479	0.39

7.2.13 Number of Crop Growing Households, Planted Area (ha) and Beans Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Cowpeas										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	2,971	804	109	0.14	804	109	0.14
Mufindi	0	0	0	0	1,029	166	37	0.23	166	37	0.23
Njombe	0	0	0	0	8,177	2,399	673	0.28	2,399	673	0.28
Ludewa	0	0	0	0	183	37	30	0.80	37	30	0.80
Makete	0	0	0	0	0	.	.	0.00	.	.	0.00
Iringa Urban	0	0	0	0	144	32	11	0.35	32	11	0.35
Kilolo	0	0	0	0	1,297	673	74	0.11	673	74	0.11
Total	0	0	0	0	13,800	4,112	934	0.23	4,112	934	0.23

7.2.14 Number of Crop Growing Households, Planted Area (ha) and Green gram Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Green gram										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0
Mufindi	0	0	0	0	129	62	5	0.08	62	5	0.08
Njombe	0	0	0	0	132	27	5	0.20	27	5	0.20
Ludewa	0	0	0	0	0	.	.	0.00	.	.	0.00
Makete	0	0	0	0	0	.	.	0.00	.	.	0.00
Iringa Urban	0	0	0	0	0	.	.	0.00	.	.	0.00
Kilolo	0	0	0	0	0	.	.	0.00	.	.	0.00
Total	0	0	0	0	260	89	10	0.12	89	10	0.12

7.2.15 Number of Crop Growing Households, Planted Area (ha) and Bambaranuts Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Bambaranuts										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	113	7	1	0.08	7	1	0.08
Mufindi	0	0	0	0	386	182	24	0.13	182	24	0.13
Njombe	0	0	0	0	1,060	644	333	0.52	644	333	0.52
Ludewa	0	0	0	0	61	2	1	0.40	2	1	0.40
Makete	0	0	0	0	62	13	5	0.40	13	5	0.40
Iringa Urban	0	0	0	0	0	.	.	0.00	.	.	0.00
Kilolo	0	0	0	0	0	.	.	0.00	.	.	0.00
Total	0	0	0	0	1,682	848	364	0.43	848	364	0.43

7.2.16 Number of Crop Growing Households, Planted Area (ha) and Field peas Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Field Peas										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	847	326	382	1.17	326	382	1.17
Mufindi	0	0	0	0	3,269	999	596	0.60	999	596	0.60
Njombe	0	0	0	0	3,893	849	657	0.77	849	657	0.77
Ludewa	62	13	5	5	5,876	1,503	871	0.58	1515	876	0.58
Makete	62	13	5	5	1,508	150	72	0.47	163	77	0.47
Iringa Urban	0	0	0	0	0	0	0	0.00	0	0	0.00
Kilolo	0	0	0	0	3,562	1,943	3,273	1.68	1,943	3,273	1.68
Total	124	25	10	10	18,955	5,769	5,851	1.01	5794	5861	1.01

7.2.17 Number of Crop Growing Households, Planted Area (ha) and Sunflower Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Sunflower										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	7,087	4,548	2,011	0.44	4,548	2,011	0.44
Mufindi	0	0	0	0	7,800	2,323	982	0.42	2,323	982	0.42
Njombe	0	0	0	0	18,467	6,739	3,695	0.55	6,739	3,695	0.55
Ludewa	0	0	0	0	604	85	41	0.48	85	41	0.48
Makete	0	0	0	0	0	0	0	0.00	0	0	0.00
Iringa Urban	0	0	0	0	93	21	11	0.55	21	11	0.55
Kilolo	0	0	0	0	3,445	1,957	626	0.32	1,957	626	0.32
Total	0	0	0	0	37,496	15,674	7,366	0.47	15,674	7,366	0.47

7.2.18 Number of Crop Growing Households, Planted Area (ha) and Simsim Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Simsim										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0	0	0	0	0	0	0
Mufindi	0	0	0	0	0	0	0	0	0	0	0
Njombe	0	0	0	0	0	0	0	0	0	0	0
Ludewa	0	0	0	0	305	64	19	0.29	64	19	0.29
Makete	0	0	0	0	62	37	3	0.08	37	3	0.08
Iringa Urban	0	0	0	0	0	0	0	0.00	0	0	0.00
Kilolo	0	0	0	0	1,208	1,143	800	0.70	1,143	800	0.70
Total					1,575	1,245	822	0.66	1,245	822	0.66

7.2.19 Number of Crop Growing Households, Planted Area (ha) and Groundnuts Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Groundnuts										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	2,509	1,405	181	0.13	1,405	181	0.13
Mufindi	0	0	0	0	2,813	2,557	725	0.28	2,557	725	0.28
Njombe	0	0	0	0	4,633	1,854	722	0.39	1,854	722	0.39
Ludewa	0	0	0	0	1,450	296	76	0.26	296	76	0.26
Makete	0	0	0	0	1,011	366	171	0.47	366	171	0.47
Iringa Urban	0	0	0	0	38	4	18	4.82	4	18	4.82
Kilolo	0	0	0	0	1,547	1,169	391	0.33	1,169	391	0.33
Total	0	0	0	0	14,001	7,650	2,285	0.30	7,650	2,285	0.30

7.2.20 Number of Crop Growing Households, Planted Area (ha) and Okra Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Okra										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0	0	0	0	0	0	0
Mufindi	0	0	0	0	0	0	0	0	0	0	0
Njombe	0	0	0	0	0	0	0	0	0	0	0
Ludewa	0	0	0	0	0	0	0	0	0	0	0
Makete	0	0	0	0	0	0	0	0	0	0	0
Iringa Urban	0	0	0	0	0	0	0	0	0	0	0
Kilolo	0	0	0	0	96	21	10	0.47	21	10	0.47
Total	0	0	0	0	96	21	10	0.47	21	10	0.47

7.2.21 Number of Crop Growing Households, Planted Area (ha) and Onion Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Onion										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	120	5	36	7.41	5	36	7.41
Mufindi	0	0	0	0	0	.	.	0.00	.	.	0.00
Njombe	0	0	0	0	929	94	828	8.80	94	828	8.80
Ludewa	0	0	0	0	122	14	2	0.18	14	2	0.18
Makete	0	0	0	0	0	0	0	0.00	0	0	0.00
Iringa Urban	0	0	0	0	0	0	0	0.00	0	0	0.00
Kilolo	0	0	0	0	799	273	505	1.85	273	505	1.85
Total	0	0	0	0	1970	386	1371	3.55	386	1371	3.55

7.2.22 Number of Crop Growing Households, Planted Area (ha) and Ginger Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Ginger										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0	0	0	0	0	0	0
Mufindi	0	0	0	0	0	0	0	0	0	0	0
Njombe	0	0	0	0	0	0	0	0	0	0	0
Ludewa	0	0	0	0	59	12	13	1.07	12	13	1.07
Makete	0	0	0	0	0	0	0	0	0	0	0
Iringa Urban	0	0	0	0	0	0	0	0	0	0	0
Kilolo	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	59	12	13	1.07	12	13	1.07

7.2.23 Number of Crop Growing Households, Planted Area (ha) and Cabbage Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Cabbage										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0
Mufindi	0	0	0	0	508	131	376	2.88	131	376	2.88
Njombe	0	0	0	0	5,632	1,137	7,881	6.93	1,137	7,881	6.93
Ludewa	0	0	0	0	1,093	76	353	4.65	76	353	4.65
Makete	0	0	0	0	244	36	487	13.62	36	487	13.62
Iringa Urban	0	0	0	0	0	0	0	0.00	0	0	0.00
Kilolo	0	0	0	0	0	0	0	0.00	0	0	0.00
Total	0	0	0	0	7,478	1,380	9,098	6.60	1,380	9,098	6.60

7.2.24 Number of Crop Growing Households, Planted Area (ha) and Tomatoes Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Tomatoes										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	1,553	343	3,442	10.03	343	3,442	10.03
Mufindi	0	0	0	0	769	182	1,446	7.96	182	1,446	7.96
Njombe	0	0	0	0	5,006	931	6,762	7.27	931	6,762	7.27
Ludewa	0	0	0	0	911	71	393	5.52	71	393	5.52
Makete	0	0	0	0	187	19	96	5.07	19	96	5.07
Iringa Urban	0	0	0	0	78	17	162	9.29	17	162	9.29
Kilolo	0	0	0	0	3,292	1,712	6,690	3.91	1,712	6,690	3.91
Total	0	0	0	0	11,796	3,274	18,991	5.80	3,274	18,991	5.80

7.2.25 Number of Crop Growing Households, Planted Area (ha) and Spinach Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Spinach										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	717	63	97	1.55	63	97	1.55
Mufindi	0	0	0	0	0	.	.	0.00	.	.	0.00
Njombe	0	0	0	0	1,059	70	108	1.54	70	108	1.54
Ludewa	0	0	0	0	61	4	2	0.49	4	2	0.49
Makete	0	0	0	0	61	6	30	4.94	6	30	4.94
Iringa Urban	0	0	0	0	12	1	4	4.45	1	4	4.45
Kilolo	0	0	0	0	96	10	12	1.19	10	12	1.19
Total	0	0	0	0	2,006	154	254	1.65	154	254	1.65

7.2.26 Number of Crop Growing Households, Planted Area (ha) and Carrot Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Carrot										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0	0	0	0	0	0	0
Mufindi	0	0	0	0	0	0	0	0	0	0	0
Njombe	0	0	0	0	0	0	0	0	0	0	0
Ludewa	0	0	0	0	60	3	6	1.90	3	6	1.90
Makete	0	0	0	0	0	0	0	0	0	0	0
Iringa Urban	0	0	0	0	0	0	0	0	0	0	0
Kilolo	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	60	3	6	1.90	3	6	1.90

7.2.27 Number of Crop Growing Households, Planted Area (ha) and Chillies Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Chillies										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	239	195	90	0.46	195	90	0.46
Mufindi	0	0	0	0	0	0	0	0	0	0	0
Njombe	0	0	0	0	0	0	0	0	0	0	0
Ludewa	0	0	0	0	0	0	0	0	0	0	0
Makete	0	0	0	0	0	0	0	0	0	0	0
Iringa Urban	0	0	0	0	12	1	10	10.00	1	10	10.00
Kilolo	0	0	0	0	0	0	0	0.00	0	0	0.00
Total	0	0	0	0	251	196	101	0.51	196	101	0.51

7.2.28 Number of Crop Growing Households, Planted Area (ha) and Amaranths Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Amaranths										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	600	53	120	2.27	53	120	2.27
Mufindi	0	0	0	0	0	.	.	0.00	.	.	0.00
Njombe	0	0	0	0	132	13	5	0.40	13	5	0.40
Ludewa	0	0	0	0	242	20	20	1.00	20	20	1.00
Makete	0	0	0	0	0	0	0	0.00	0	0	0.00
Iringa Urban	0	0	0	0	0	0	0	0.00	0	0	0.00
Kilolo	0	0	0	0	0	0	0	0.00	0	0	0.00
Total	0	0	0	0	974	86	145	1.68	86	145	1.68

7.2.29 Number of Crop Growing Households, Planted Area (ha) and Pumpkin Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Pumpkin										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0	.	.	0.00	.	.	0.00
Mufindi	0	0	0	0	0	.	.	0.00	.	.	0.00
Njombe	0	0	0	0	264	40	21	0.53	40	21	0.53
Ludewa	0	0	0	0	59	6	8	1.38	6	8	1.38
Makete	0	0	0	0	575	41	29	0.71	41	29	0.71
Iringa Urban	0	0	0	0	0	.	.	0.00	.	.	0.00
Kilolo	0	0	0	0	192	23	24	1.03	23	24	1.03
Total	0	0	0	0	1,090	111	83	0.75	111	83	0.75

7.2.30 Number of Crop Growing Households, Planted Area (ha) and Egg plant Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Egg Plant										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0	0	0	0	0	.	.
Mufindi	0	0	0	0	0	0	0	0	0	.	.
Njombe	0	0	0	0	0	0	0	0	0	.	.
Ludewa	0	0	0	0	0	0	0	0	0	.	.
Makete	0	0	0	0	0	0	0	0	0	.	.
Iringa Urban	0	0	0	0	12	1	11	11.24	1	11	11.24
Kilolo	0	0	0	0
Total	0	0	0	0	12	1	11	11.24	1	11	11.24

7.2.31 Number of Crop Growing Households, Planted Area (ha) and Water Mellon Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Water Mellon										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0
Mufindi	0	0	0	0	0
Njombe	0	0	0	0	0
Ludewa	0	0	0	0	0
Makete	0	0	0	0	62	2	1	0.74	2	1	0.74
Iringa Urban	0	0	0	0	0
Kilolo	0	0	0	0	0
Total	0	0	0	0	62	2	1	0.74	2	1	0.74

7.2.32 Number of Crop Growing Households, Planted Area (ha) and Tobacco Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Tobacco										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	116	61	0	0.00	61	0	0.00
Mufindi	0	0	0	0	0	0	0	0	0	0	0
Njombe	0	0	0	0	0	0	0	0	0	0	0
Ludewa	0	0	0	0	0	0	0	0	0	0	0
Makete	0	0	0	0	0	0	0	0	0	0	0
Iringa Urban	0	0	0	0	0	0	0	0	0	0	0
Kilolo	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	116	61	0	0.00	61	0	0.00

7.2.33 Number of Crop Growing Households, Planted Area (ha) and Pyrethrum Harvested (tons) by season and District 2002/03 Agricultural Year.

District	Pyrethrum										
	Dry Season				Wet Season				Total		
	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	No. of H/holds	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)	Planted Area (ha)	Quantity Harvested (tons)	Yield (ton/ha)
Iringa Rural	0	0	0	0	0	0	0	0	0	0	0
Mufindi	0	0	0	0	129	52	12	0.22	52	12	0.22
Njombe	0	0	0	0	0			0.00	0	0	0.00
Ludewa	0	0	0	0	245	50	7	0.14	50	7	0.14
Makete	0	0	0	0	245	234	72	0.31	234	72	0.31
Iringa Urban	0	0	0	0	0	0	0	0.00	0	0	0.00
Kilolo	0	0	0	0	0	0	0	0.00	0	0	0.00
Total	0	0	0	0	618	336	90	0.27	336	90	0.27

PERMANENT CROPS

7.3: Production of Permanent Crops by Crop Type and Region - Iringa

		Area Planted (ha)	Area Harvested (ha)	Quantity Harvested (tons)	Yield (Kgs/ha)
Iringa Rural	Star Fruit	95	0	1	0
	Sugarcane	15	15	32	2,198
	Tamarin	.	0	.	0
	Banana	883	87	94	1,088
	Avocado	.	0	1	0
	Mango	801	444	259	582
	Pawpaw	168	0	57	0
	Orange	36	0	0	0
	Guava	326	69	92	1,329
	Plums	485	5	240	49,400
	Apples	1,456	10	300	30,875
	Pears	1,037	93	612	6,593
	Pitches	140	74	208	2,816
	Lime/Lemon	191	34	43	1,245
Total	5,633	830	1,938	2,334	
Mufindi	Star Fruit	202	46	39	842
	Coffee	284	52	7	143
	Tea	172	694	1,921	2,768
	Sugarcane	10	10	186	18,038
	Banana	2,540	4,623	1,747	378
	Avocado	98	21	.	0
	Mango	1,122	896	39	43
	Pineapple	156	156	5	30
	Orange	112	100	444	4,446
	Guava	52	0	.	0
	Plums	.	0	.	0
	Apples	170	160	175	1,091
	Pears	91	116	270	2,324
	Pitches	16	0	273	0
Lime/Lemon	29	29	8	268	
Total	5,055	6,902	5,112	741	
Makete	Mangostine	3	0	50	0
	Pigeon Pea	.	.	29	0
	Malay Apple	.	.	29	0
	Star Fruit	.	11	1	124
	Coffee	1,016	275	68	249
	Tea	497	497	7,408	14,905
	Wattle	.	.	.	0
	Sugarcane	13	.	20	0
	Banana	1,415	932	2,517	2,699
	Avocado	777	31	147	4,757
	Mango	606	5	104	19,471
	Pawpaw	27	13	83	6,174
	Pineapple	.	6	.	0
	Orange	16	13	35	2,645
	Mandarine/Tangerine	.	.	.	0
	Guava	13	175	30	175
	Plums	14	55	590	10,761
	Apples	120	152	323	2,124
	Pears	39	13	3,694	277,281
	Pitches	1,181	72	1,859	25,822
	Lime/Lemon	242	0	298	0
Rambutan	.	.	2,469	0	
Total	5,979	2,251	19,755	8,775	

cont...Production of Permanent Crops by Crop Type and Region - Iringa

Njombe	Pigeon Pea	44	44	22	494
	Cashewnut	.	356	147	414
	Sisal	6	6	2	356
	Coffee	512	597	702	1,174
	Sugarcane	25	12	29	2,381
	Banana	935	899	3,058	3,401
	Avocado	38	12	37	3,042
	Mango	329	38	750	19,561
	Orange	18	12	96	7,899
	Guava	0	0	20	0
	Plums	6	6	1	99
	Apples	45	32	136	4,292
	Pears	6	6	.	0
	Pitches	67	37	7	181
	Lime/Lemon	24	.	.	0
Total	2,055	2,058	5,006	2,432	
Ludewa	Coffee	151	66	20	301
	Sugarcane	9	1	200	192,746
	Banana	265	87	358	4,090
	Avocado	3	0	12	46,930
	Plums	9	3	238	91,677
	Apples	0	13	156	12,435
	Pears	752	12	125	10,065
	Pitches	508	35	1,238	35,357
	Lime/Lemon	0	0	31	0
	Total	1,696	218	2,379	10,929
Kilolo	Pigeon Pea	54	39	7	173
	Coffee	180	29	6	204
	Wattle	0	0	1	0
	Sugarcane	139	55	1,329	24,310
	Jack Fruit	317	2,012	307	152
	Mpesheni	4	0	22	0
	Banana	3,707	635	2,470	3,889
	Avocado	8	0	0	0
	Mango	123	0	723	0
	Pawpaw	61	0	3	0
	Pineapple	28	25	20	779
	Orange	41	0	58	0
	Guava	45	12	101	8,660
	Plums	501	265	178	673
	Apples	0	0	0	0
	Pears	913	410	1,498	3,655
	Pitches	224	3,658	2,302	629
	Lime/Lemon	39	.	18	0
Total	6,383	7,139	9,041	1,266	

cont...Production of Permanent Crops by Crop Type and Region -
Iringa

Total	Mangostine	3	0	50	
	Pigeon Pea	98	83	58	695
	Malay Apple	.	.	29	0
	Star Fruit	297	57	41	718
	Cashewnut	.	356	147	414
	Sisal	6	6	2	356
	Coffee	2143	1020	803	788
	Tea	669	1191	9329	7833
	Wattle	.	.	1	0
	Sugarcane	211	93	1797	19294
	Tamarin	.	0	.	0
	Jack Fruit	317	2012	307	152
	Mpesheni	4	0	22	0
	Banana	9745	7263	10244	1410
	Avocado	925	64	197	3079
	Mango	2981	1383	1873	1354
	Pawpaw	256	13	143	10635
	Pineapple	184	188	24	129
	Orange	224	125	633	5050
	Mandarine/Tangerine	0	0	0	0
	Guava	437	256	244	953
	Plums	1014	333	1246	3743
	Apples	1791	366	1090	2975
	Pears	2839	651	6199	9528
	Pitches	2135	3875	5885	1519
	Lime/Lemon	524	63	397	6294
	Rambutan	0	0	2469	0
	Total	26802	19399	43231	2229

**Cont.....Production of Permanent by
Type and Region.**

Crop	Area Planted	%
Mangostine	3	0.0
Pigeon Pea	98	0.4
Malay Apple	0	0.0
Star Fruit	297	1.1
Cashewnut	0	0.0
Sisal	6	0.0
Coffee	2143	8.0
Tea	669	2.5
Wattle	0	0.0
Sugarcane	211	0.8
Tamarin	0	0.0
Jack Fruit	317	1.2
Mpesheni	4	0.0
Banana	9745	36.4
Avocado	925	3.4
Mango	2981	11.1
Pawpaw	256	1.0
Pineapple	184	0.7
Orange	224	0.8
Mandarine/Tangerine	0	0.0
Guava	437	1.6
Plums	1014	3.8
Apples	1791	6.7
Pears	2839	10.6
Pitches	2135	8.0
Lime/Lemon	524	2.0
Rambutan	0	0.0
Total	26,802	100.0

cont.....Area Planted and area per household by region - Iringa Region

Banana					
District	Area Planted with banana	Total area planted (ha)	% of total area planted (ha)	hh with banana	Average planted area per household
Kilolo	3,707	70,878	38.04	5,454	0.68
Mufindi	2,540	80,173	26.06	3,317	0.77
Makete	1,415	35,279	14.52	1,139	1.24
Ludewa	935	37,118	9.59	3,094	0.30
Iringa Rural	883	72,498	9.06	1,678	0.53
Njombe	265	108,870	2.72	4,746	0.06
Iringa Urban	0	1,109	0.00	0	0.00
Total	9,745	405,924	100.00	19,428	0.50

Mango					
District	Area Planted with Mango	Total area planted (ha)	% of total area planted	hh with Mango	Average planted area per household
Mufindi	1,122	80,173	37.6	125,485	0.01
Iringa Rural	801	72,498	26.9	98,946	0.01
Makete	606	35,279	20.3	74,425	0.01
Njombe	329	108,870	11.0	217,457	0.00
Kilolo	123	70,878	4.1	87,174	0.00
Ludewa	0	37,118	0.0	0	0.00
Iringa Urban	0	1,109	0.0	0	0.00
Total	2,981	405,924	100.0	603,486	0.00

Pears					
District	Area Planted with Pears	Total area planted (ha)	% of total area planted	hh with mango	Average planted area per household
Kilolo	913	70,878	71.95	2,691	0.34
Mufindi	207	80,173	16.31	597	0.35
Iringa Rur	92	72,498	7.25	362	0.25
Makete	39	35,279	3.07	389	0.10
Ludewa	12	37,118	0.95	248	0.05
Njombe	6	108,870	0.47	61	0.10
Iringa Urb	0	1,109	0.00	0	0.00
Total	1,269	405,924	100.00	4,348	0.00

Coffee					
District	Area Planted with Coffee	Total area planted (ha)	% of total area planted	hh with Coffee	Average planted area per household
Makete	1,016	35,279	47.41	929	1.09
Njombe	512	108,870	23.89	1,570	0.33
Mufindi	284	80,173	13.25	514	0.55
Kilolo	180	70,878	8.40	865	0.21
Ludewa	151	37,118	7.05	505	0.30
Iringa Rural	0	72,498	0.00	0	0.00
Iringa Urban	0	1,109	0.00	0	0.00
Total	2,143	405,924	100.00	4,384	0.00

cont...Planted Area with Fertiliser by Fertiliser Type and region- Iringa
Region

Crop	Fertiliser Use				Total
	Mostly Farm Yard Manure	Mostly Compost	Mostly Inorganic Fertiliser	No Fertiliser Applied	
Maize	71,573	13,173	70,458	98,671	253,874
Paddy	200	75	348	4,043	4,666
Sorghum	240	0	170	2,145	2,555
Bulrush Millet	86	0	0	0	86
Finger Millet	12	19	0	3,294	3,326
Wheat	1,440	397	1,711	12,674	16,223
Barley	10	0	0	110	120
Cassava	297	183	70	4,187	4,737
Sweet Potatoes	60	26	62	500	649
Irish Potatoes	2,243	283	10,757	4,895	18,178
Yams	0	0	121	106	227
Cocoyam	0	0	26	22	48
Mung Beans	0	0	4	0	4
Beans	11,050	3,476	10,631	34,504	59,661
Cowpeas	483	209	1,004	2,416	4,112
Green Gram	0	0	0	89	89
Pigeon Peas	0	0	0	12	12
Bambaranuts	0	0	0	848	848
Sunflower	3,691	492	1,892	9,600	15,674
Simsim	78			1,168	1,245
Groundnuts	137	232	185	7,096	7,650
Soya Beans	0	0	0	148	148
Okra	0	0	0	21	21
Onions	54		332	0	386
Ginger	0	0	0	12	12
Cabbage	943	54	307	76	1,380
Tomatoes	523	117	2,398	236	3,274
Spinnach	97	12	45		154
Carrot	3		0	0	3
Chillies		1	195	0	196
Amaranths	52	28	0	6	86
Pumpkins	3	0	0	108	111
Egg Plant		1	0	0	1
Water Mellon	0	0	0	2	2
Tobacco	0	0	0	61	61
Pyrethrum				336	336
Total	93,635	19,013	102,596	190,680	405,924

**cont...Planted Area with Fertiliser by Fertiliser Type
and region- Iringa Region**

Crop	Mostly Farm Yard Manure	Total	%
Bulrush Millet	86	86	100.0
Carrot	3	3	100.0
Cabbage	943	1,380	68.4
Spinnach	97	154	63.0
Amaranths	52	86	60.4
Maize	71,573	253,874	28.2
Sunflower	3,691	15,674	23.5
Beans	11,050	59,661	18.5
Tomatoes	523	3,274	16.0
Onions	54	386	14.0
Irish Potatoes	2,243	18,178	12.3
Cowpeas	483	4,112	11.7
Sorghum	240	2,555	9.4
Sweet Potatoes	60	649	9.3
Wheat	1,440	16,223	8.9
Barley	10	120	8.6
Cassava	297	4,737	6.3
Simsim	78	1,245	6.2
Paddy	200	4,666	4.3
Pumpkins	3	111	2.3
Groundnuts	137	7,650	1.8
Finger Millet	12	3,326	0.4
Yams	0	227	0.0
Cocoyam	0	48	0.0
Mung Beans	0	4	0.0
Green Gram	0	89	0.0
Pigeon Peas	0	12	0.0
Bambaranuts	0	848	0.0
Soya Beans	0	148	0.0
Okra	0	21	0.0
Ginger	0	12	0.0
Egg Plant	0	1	0.0
Water Mellon	0	2	0.0
Tobacco	0	61	0.0
Pyrethrum	0	336	0.0
Chillies		196	
Total	93,635	405,924	23.1

**cont...Planted Area with Fertiliser by Fertiliser Type
and region- Iringa Region**

Crop	Mostly Inorganic Fertiliser	Total	%
Mung Beans	4	4	100.00
Chillies	195	196	99.48
Onions	332	386	86.05
Tomatoes	2,398	3,274	73.25
Irish Potatoes	10,757	18,178	59.17
Cocoyam	26	48	54.33
Yams	121	227	53.18
Spinnach	45	154	29.05
Maize	70,458	253,874	27.75
Cowpeas	1,004	4,112	24.41
Cabbage	307	1,380	22.28
Beans	10,631	59,661	17.82
Sunflower	1,892	15,674	12.07
Wheat	1,711	16,223	10.55
Sweet Potatoes	62	649	9.61
Paddy	348	4,666	7.46
Sorghum	170	2,555	6.67
Groundnuts	185	7,650	2.41
Cassava	70	4,737	1.48
Bulrush Millet	0	86	0.00
Finger Millet	0	3,326	0.00
Barley	0	120	0.00
Green Gram	0	89	0.00
Pigeon Peas	0	12	0.00
Bambaranuts	0	848	0.00
Simsim	0	1,245	0.00
Soya Beans	0	148	0.00
Okra	0	21	0.00
Ginger	0	12	0.00
Carrot	0	3	0.00
Amaranths	0	86	0.00
Pumpkins	0	111	0.00
Egg Plant	0	1	0.00
Water Mellon	0	2	0.00
Tobacco	0	61	0.00
Pyrethrum	0	336	0.00
Total	102,596	405,924	25.27

**cont...Planted Area with Fertiliser by Fertiliser Type
and region- Iringa Region**

Crop	Mostly Compost	Total	%
Maize	13,173	253,874	5.19
Paddy	75	4,666	1.60
Sorghum	0	2,555	0.00
Bulrush Millet	0	86	0.00
Finger Millet	19	3,326	0.58
Wheat	397	16,223	2.45
Barley	0	120	0.00
Cassava	183	4,737	3.87
Sweet Potatoes	26	649	3.97
Irish Potatoes	283	18,178	1.56
Yams	0	227	0.00
Cocoyam	0	48	0.00
Mung Beans	0	4	0.00
Beans	3,476	59,661	5.83
Cowpeas	209	4,112	5.08
Green Gram	0	89	0.00
Pigeon Peas	0	12	0.00
Bambaranuts	0	848	0.00
Sunflower	492	15,674	3.14
Simsim	0	1,245	0.00
Groundnuts	232	7,650	3.04
Soya Beans	0	148	0.00
Okra	0	21	0.00
Onions	0	386	0.00
Ginger	0	12	0.00
Cabbage	54	1,380	3.90
Tomatoes	117	3,274	3.57
Spinnach	12	154	7.91
Carrot	0	3	0.00
Chillies	1	196	0.52
Amaranths	28	86	32.67
Pumpkins	0	111	0.00
Egg Plant	1	1	100.00
Water Mellon	0	2	0.00
Tobacco	0	61	0.00
Pyrethrum	0	336	0.00
Total	19,013	405,924	4.68

AGROPROCESSING

8.0a Number of Crops Growing Households reported to have Processed Farm Products by District , 2002/03 Agricultural Year

District	Households That Processed Product		Households That Did Not Process Product		Total	
	Number	%	Number	%	Number	%
Iringa Rural	51,242	97	1,471	3	52,714	100
Mufindi	55,749	98	1,017	2	56,766	100
Makete	78,004	99	768	1	78,772	100
Njombe	23,428	96	1,099	4	24,527	100
Ludewa	24,735	98	492	2	25,227	100
Iringa Urban	1,150	99	12	1	1,162	100
Kilolo	37,803	96	1,746	4	39,549	100
Total	272,110	98	6,607	2	278,717	100

8.0b Number of Crop Growing Households By Method of Processing and District; Agricultural Year

District	Method of Processing								Total
	On Farm by Hand	On Farm by Machine	By Neighbour Machine	By Co-operative Union	By Trader	On Large Scale Farm	Other	By Factory	
Iringa Rural	2,248	1,204	46,740	0	573	0	0	477	51,242
Mufindi	4,983	2,404	47,850	0	0	0	511	0	55,749
Makete	8,207	2,099	62,676	133	796	0	133	3,961	78,004
Njombe	7,994	1,090	14,283	0	0	0	61	0	23,428
Ludewa	1,581	1,136	21,956	0	0	62	0	0	24,735
Iringa Urban	13	12	979	0	146	0	0	0	1,150
Kilolo	2,454	2,377	32,876	0	0	0	96	0	37,803
Total	27,480	10,322	227,360	133	1,515	62	801	4,438	272,110
%	10.10	3.79	83.55	0.05	0.56	0.02	0.29	1.63	100.00

8.1.1 AGROPROCESSING: Number of Crop Growing Households Processing Crops During 2002/03 Agricultural Year By Location and Crop, Iringa Region.

Crop	Method of Processing									
	On Farm by Hand	On Farm by Machine	By Neighbour Machine	By Farmers Association	By Co-operative Union	By Trader	On Large Scale Farm	Other	By Factory	Total
Maize	2,024	1,204	42,560	0	0	0	0	0	240	46,028
Paddy	0	0	4,428	0	0	813	0	0	236	5,478
Sorghum	622	0	876	0	0	0	0	0	0	1,498
Cassava	349	0	0	0	0	0	0	0	0	349
Beans	3,719	0	0	0	0	0	0	0	0	3,719
Cowpeas	116	0	0	0	0	0	0	0	0	116
Sunflower	236	0	485	0	0	0	0	0	241	962
Groundnut	120	0	0	0	0	0	0	0	0	120
Mango	121	0	0	0	0	0	0	0	0	121
Pawpaw	121	0	0	0	0	0	0	0	0	121
Orange	121	0	0	0	0	0	0	0	0	121
Guava	121	0	0	0	0	0	0	0	0	121
Maize	4,865	2,404	47,593	0	0	0	0	511	0	55,373
Paddy	0	0	129	0	0	0	0	0	0	129
Finger Millet	0	127	383	0	0	0	0	0	0	511
Wheat	721	0	3,230	0	0	0	0	0	0	3,950
Irish Potatoes	0	0	129	0	0	0	0	0	0	129
Beans	384	0	257	0	0	0	0	0	0	641
Bambaranut	257	0	0	0	0	0	0	0	0	257
Sunflower	1,521	0	128	0	0	0	0	1,029	0	2,678
Groundnut	385	0	0	0	0	0	0	0	0	385
Maize	8,075	2,099	62,278	0	133	796	0	133	3,961	77,475
Finger Millet	0	0	531	0	0	0	0	0	0	531
Wheat	133	0	5,475	0	0	0	0	0	0	5,608
Cassava	530	0	132	0	0	0	0	0	0	662
Beans	132	0	264	0	0	0	0	0	0	396
Sunflower	663	0	4,367	0	0	0	0	0	133	5,162
Groundnut	133	0	132	0	0	0	0	0	0	264
Coffee	133	133	133	0	0	0	0	0	0	398
Maize	6,171	1,090	14,223	0	0	0	0	61	0	21,546
Paddy	1,094	61	61	0	0	0	0	0	0	1,217
Sorghum	61	61	61	0	0	0	0	0	0	183
Finger Millet	61	61	61	0	0	0	0	0	0	183
Wheat	60	122	1,765	0	0	0	0	0	0	1,947
Cassava	3,820	61	0	0	0	0	0	0	0	3,881
Beans	486	0	0	0	0	0	0	0	0	486
Sunflower	61	0	0	0	0	0	0	0	0	61

cont..Number of Crop Growing Households Processing Crops During 2002/03 Agricultural Year By Location and Crop, Iringa Region.

Groundnut	122	0	0	0	0	0	0	0	0	122
Coffee	61	0	121	0	0	0	0	0	0	182
Maize	1,453	1,136	21,831	0	0	0	62	0	0	24,481
Paddy	62	62	0	0	0	0	0	0	0	123
Sorghum	0	0	1,280	0	0	0	0	0	0	1,280
Finger Millet	0	0	479	0	0	0	0	0	0	479
Wheat	1,209	443	9,617	64	0	0	0	64	0	11,396
Irish Potatoes	0	0	63	0	0	0	0	0	0	63
Beans	2,099	64	127	0	0	0	0	0	0	2,289
Groundnut	62	0	0	0	0	0	0	0	0	62
Coffee	128	0	0	0	0	0	0	0	0	128
Maize	13	12	941	0	0	119	0	0	0	1,086
Beans	0	0	37	0	0	26	0	0	0	64
Groundnut	12	0	0	0	0	0	0	0	0	12
Maize	2,358	2,377	32,876	0	0	0	0	96	0	37,707
Finger Millet	1,153	0	384	0	0	0	0	0	0	1,538
Wheat	0	0	192	0	0	0	0	0	0	192
Irish Potatoes	0	0	0	0	0	0	0	96	0	96
Beans	96	0	0	0	0	0	0	1,634	0	1,730
Sunflower	98	0	1,075	0	0	0	0	0	0	1,174
Simsim	0	0	100	0	0	0	0	0	0	100
Banana	0	0	0	0	0	0	0	1,442	0	1,442
Pineapple	0	0	0	0	0	0	0	96	0	96

8.1.1b AGROPROCESSING: Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2003/04 Agricultural Year By Use of Product and Crop, Iringa Region

Crop	Product Use						
	Household / Human Consumption	Fuel for Cooking	Sale Only	Animal Consumption	Did Not Use	Other	Total
Maize	259,983	0	1,391	1,627	349	345	263,695
Paddy	5,655	0	1,292	0	0	0	6,946
Sorghum	2,897	0	64	0	0	0	2,961
Finger Millet	2,472	96	673	0	0	0	3,241
Wheat	23,032	0	0	62	0	0	23,094
Cassava	4,831	61	0	0	0	0	4,892
Irish Potatoes	288	0	0	0	0	0	288
Beans	9,009	0	63	132	121	0	9,325
Cowpeas	116	0	0	0	0	0	116
Bambaranut	129	0	129	0	0	0	257
Sunflower	8,016	0	1,460	462	98	0	10,037
Simsim	0	0	100	0	0	0	100
Groundnut	836	0	129	0	0	0	965
Coffee	261	0	387	0	60	0	708
Banana	1,442	0	0	0	0	0	1,442
Mango	121	0	0	0	0	0	121
Pawpaw	121	0	0	0	0	0	121
Pineapple	96	0	0	0	0	0	96
Orange	121	0	0	0	0	0	121
Guava	121	0	0	0	0	0	121
Total	319,548	157	5,687	2,283	629	345	328,649

8.1.1c AGROPROCESSING: Number of Crop Growing Households Reporting Processing of Farm Products Produced During 2002/03 Agricultural Year By Location of Sale of Product and Crop, Iringa Region.

Crop	Where Sold									
	Neighbours	Local Market / Trade Store	Secondary Market	Marketing Co-operative	Farmers Association	Large Scale Farm	Trader at Farm	Other	Did not Sell	Total
Maize	11,952	1,730	375	578	60	134	3,377	7,449	238,041	263,695
Paddy	811	236	0	0	0	0	931	927	4,041	6,946
Sorghum	120	0	0	0	0	0	120	0	2,721	2,961
Finger Millet	96	673	96	0	0	0	0	0	2,376	3,241
Wheat	377	310	0	64	0	0	0	0	22,344	23,094
Cassava	0	0	0	0	0	0	0	0	4,892	4,892
Irish Potatoes	0	0	0	0	0	0	0	0	288	288
Beans	0	0	0	0	0	0	0	96	9,229	9,325
Cowpeas	0	0	0	0	0	0	0	0	116	116
Bambaranut	0	129	0	0	0	0	0	0	129	257
Sunflower	1,558	248	0	0	0	0	0	352	7,878	10,037
Simsim	100	0	0	0	0	0	0	0	0	100
Groundnut	129	190	0	0	0	0	0	0	646	965
Coffee	133	0	0	265	121	0	61	0	128	708
Banana	0	0	0	0	0	0	0	0	1,442	1,442
Mango	0	0	0	0	0	0	0	0	121	121
Pawpaw	0	0	0	0	0	0	0	0	121	121
Pineapple	0	0	0	0	0	0	0	0	96	96
Orange	0	0	0	0	0	0	0	0	121	121
Guava	0	0	0	0	0	0	0	0	121	121
Total	15,275	3,516	472	907	181	134	4,489	8,824	294,851	328,649

8.1.1d AGRO PROCESSING: Number of Crop Growing Households By Main Product During 2002/03 Agriculture Year, Iringa Region

District	Main Product					
	Flour / Meal	Grain	Oil	Juice	Fiber	Total
Iringa Rural	42,029	8,971	243	0	0	51,242
Mufindi	49,714	5,911	0	123	0	55,749
Makete	77,077	927	0	0	0	78,004
Njombe	22,049	1,379	0	0	0	23,428
Ludewa	23,232	1,439	0	64	0	24,735
Iringa Urban	1,137	12	0	0	0	1,150
Kilolo	37,508	96	0	102	96	37,803
Total	252,747	18,735	243	290	96	272,110

8.1.1e AGRO PROCESSING: Number of Crop Growing Households By Main Product During 2002/03 Agriculture Year, Iringa Region

District	Product Use					
	Household / Human Consumption	Sale Only	Animal Consumption	Did Not Use	Other	Total
Iringa Rural	49,101	1,656	243	0	243	51,242
Mufindi	55,000	118	631	0	0	55,749
Makete	77,342	133	396	133	0	78,004
Njombe	22,639	182	427	180	0	23,428
Ludewa	24,611	62	62	0	0	24,735
Iringa Urban	1,150	0	0	0	0	1,150
Kilolo	37,312	293	0	96	102	37,803
Total	267,155	2,443	1,759	409	345	272,110

8.1.1f AGRO PROCESSING: Number of Crop Growing Households By Where Product Sold During 2002/03 Agricultural Year, Iringa Region

District	Where Sold									Total
	Neighbours	Local Market / Trade Store	Secondary Market	Marketing Co-operative	Farmers Association	Large Scale Farm	Trader at Farm	Other	Did not Sell	
Iringa Rural	2,979	593	0	0	0	121	1,533	1,168	44,848	51,242
Mufindi	2,777	383	118	384	0	0	900	129	51,058	55,749
Makete	2,901	0	133	133	0	0	1,321	6,719	66,797	78,004
Njombe	727	0	0	61	120	0	122	0	22,398	23,428
Ludewa	1,198	991	125	0	0	0	0	0	22,422	24,735
Iringa Urban	0	0	0	0	0	13	0	0	1,137	1,150
Kilolo	2,239	0	0	0	0	0	192	577	34,795	37,803
Total	12,820	1,967	375	578	120	134	4,068	8,593	243,455	272,110

8.1.1g AGRO PROCESSING: Number of Crop Growing Households By By-Product During 2002/03 Agriculture Year and District During

District	By Product								Total
	Bran	Cake	Husk	Juice	Pulp	Shell	No by-product	Other	
Iringa Rural	41,463	121	4,529	0	0	0	5,129	0	51,242
Mufindi	52,561	0	119	127	0	0	2,942	0	55,749
Makete	67,123	264	0	265	0	259	9,960	132	78,004
Njombe	18,083	0	545	0	60	121	4,619	0	23,428
Ludewa	17,073	0	0	0	0	0	7,662	0	24,735
Iringa Urban	1,086	26	0	0	0	0	39	0	1,150
Kilolo	36,616	0	96	0	102	0	988	0	37,803
Total	234,005	411	5,289	392	163	380	31,339	132	272,110

MARKETING

10.1 Number of Crop Producing Households Reporting Selling Agricultural Products During 2003/04 By District, Iringa Region

District	Number of Households that Sold		Number of Households that Did not Sell		Total Number
	Number	%	Number	%	
Iringa Rural	27,148	51.5	25,566	48.5	52,714
Mufindi	31,576	55.6	25,190	44.4	56,766
Makete	64,428	81.8	14,344	18.2	78,772
Njombe	19,695	80.3	4,832	19.7	24,527
Ludewa	16,967	67.3	8,260	32.7	25,227
Iringa Urban	388	33.3	775	66.7	1,162
Kilolo	30,884	78.1	8,665	21.9	39,549
Total	191,085	68.6	87,632	31.4	278,717

10.2 Number of Crop Producing Households Reporting Not Selling Agricultural Products During 2002/03 Agricultural Year, Iringa Region.

District	Main Reasons for Not Selling Crops									
	Price Too Low	Production Insufficient to Sell	Market Too Farm	Farmers Association Problems	Co-operative Problems	Trade Union Problems	Government Regulatory Board Problems	Other	Not applicable	Total
Iringa Rural	1,170	27,609	121	0	242	0	0	703	21,312	51,158
Mufindi	1,853	26,041	122	129	0	0	127	129	27,364	55,764
Makete	926	16,169	0	0	0	0	133	131	56,952	74,311
Njombe	181	5,928	120	0	120	0	0	60	17,876	24,284
Ludewa	1,191	9,636	956	64	63	0	0	0	11,535	23,444
Iringa Urban	12	840	0	0	0	13	13	0	270	1,149
Kilolo	487	11,352	0	0	0	0	0	496	26,709	39,045
Total	5,820	97,575	1,318	192	424	13	273	1,519	162,019	269,154

10.3 Proportion of Households who Reported Not Selling their crops by district during 2002/03 Agricultural Year, Iringa Region.

District	Price Too Low	Production Insufficient to Sell	Market Too Farm	Farmers Association Problems	Co-operative Problems	Trade Union Problems	Government Regulatory Board Problems	Other	Not applicable	Total
Iringa Rural	2.29	53.97	0.24	0.00	0.47	0.00	0.00	1.37	41.66	100.00
Mufindi	3.32	46.70	0.22	0.23	0.00	0.00	0.23	0.23	49.07	100.00
Makete	1.25	21.76	0.00	0.00	0.00	0.00	0.18	0.18	76.64	100.00
Njombe	0.74	24.41	0.49	0.00	0.49	0.00	0.00	0.25	73.61	100.00
Ludewa	5.08	41.10	4.08	0.27	0.27	0.00	0.00	0.00	49.20	100.00
Iringa Urban	1.09	73.11	0.00	0.00	0.00	1.15	1.15	0.00	23.50	100.00
Kilolo	1.25	29.08	0.00	0.00	0.00	0.00	0.00	1.27	68.41	100.00
Total	2.16	36.25	0.49	0.07	0.16	0.00	0.10	0.56	60.20	100.00

IRRIGATION /EROSION CONTROL

11.1 Number and Percent of Households Reporting use of Irrigation During 2002/03 Agricultural Year By District

District	Households Practicing Irrigation		Households not Practicing Irrigation		Total
	Number of Household	%	Number of Household	%	Number of Household
Iringa Rural	15,348	29.1	37,366	70.9	52,714
Mufindi	8,587	15.1	48,179	84.9	56,766
Makete	17,623	22.4	61,149	77.6	78,772
Njombe	3,032	12.4	21,495	87.6	24,527
Ludewa	190	0.8	25,036	99.2	25,227
Iringa Urban	76	6.6	1,086	93.4	1,162
Kilolo	11,212	28.3	28,338	71.7	39,549
Total	56,068	20.1	222,648	79.9	278,717

11.2 IRRIGATION: Area of Irrigated and Non Irrigatable (ha) Land By District during 2002/03 agricultural year

District	Irrigated Area	Area Irrigated Land this Year	%
Iringa Rural	6,325	5,938	94
Mufindi	3,423	2,616	76
Makete	5,068	3,921	77
Njombe	1,875	1,015	54
Ludewa	44	39	89
Iringa Urban	37	37	100
Kilolo	6,255	4,811	77
Total	23,027	18,377	80

11.3 IRRIGATION: Number of Households Using Irrigation By Source of Irrigation Water During 2003/04 Agricultural Year By District

District	Source of Irrigation Water							Total
	River	Lake	Dam	Well	Borehole	Canal	Pipe water	
Iringa Rural	9,961	0	472	2,279	362	2,275	0	15,348
Mufindi	5,910	0	0	1,017	0	1,660	0	8,587
Makete	5,408	0	133	5,940	0	6,010	132	17,623
Njombe	2,549	0	0	61	0	422	0	3,032
Ludewa	0	0	0	62	0	128	0	190
Iringa Urban	64	0	0	12	0	0	0	76
Kilolo	6,086	96	577	1,557	0	2,896	0	11,212
Total	29,977	96	1,181	10,928	362	13,392	132	56,068
%	53	0	2	19	1	24	0	100

11.4 IRRIGATION: Number of Households Using Irrigation By Method of Irrigation of Obtaining Water By District

District	Method of Obtaining Water					Total
	Gravity	Hand Bucket	Hand Pump	Motor Pump	Other	
Iringa Rural	7,889	6,641	120	121	577	15,348
Mufindi	4,488	4,099	0	0	0	8,587
Makete	5,801	11,560	132	131	0	17,623
Njombe	1,570	363	0	0	1,099	3,032
Ludewa	64	126	0	0	0	190
Iringa Urban	26	37	12	0	0	76
Kilolo	6,268	4,554	288	102	0	11,212
Total	26,106	27,380	553	354	1,676	56,068
%	47	49	1	1	3	100

11.5 IRRIGATION: Number of Agricultural Households By Method of Field Application of Irrigation Water and District for the 2002/03 agricultural year

District	Method of Application				Total
	Flood	Sprinkler	Water Hose	Bucket / Watering Can	
Iringa Rural	7,744	360	0	7,243	15,348
Mufindi	3,329	129	257	4,872	8,587
Makete	4,611	661	531	11,821	17,623
Njombe	2,366	0	0	666	3,032
Ludewa	64	0	0	126	190
Iringa Urban	0	0	0	76	76
Kilolo	5,683	96	198	5,235	11,212
Total	23,797	1,246	985	30,040	56,068
%	42.4433115	2.22215465	1.75762441	53.5769095	100

11.6 IRRIGATION: Number of Households With Erosion Control/Water Harvesting Facilities on their Land By District

District	Presence of Erosion control/Water Harvesting Facilities				
	Have facility		Does Not Have Facility		Total
	Number	%	Number	%	Number
Iringa Rural	7,421	14	45,292	86	52,714
Mufindi	6,724	12	50,042	88	56,766
Makete	18,726	24	60,045	76	78,772
Njombe	6,248	25	18,279	75	24,527
Ludewa	4,562	18	20,665	82	25,227
Iringa Urban	285	24	878	76	1,162
Kilolo	15,068	38	24,481	62	39,549
Total	59,034	21	219,683	79	278,717

11.7 EROSION CONTROL: Number of Erosion Control Harvesting Structures By Type and District

District	Type of Erosion Control								Total Number of Structures
	Terraces	Erosion Control Bunds	Gabions / Sandbag	Vetiver Grass	Tree Belts	Water Harvesting Bunds	Drainage Ditches	Dam	
Iringa Rural	6,538	43,171	1,519	3,762	722	3,353	3,515	0	62,579
Mufindi	0	12,442	0	1,266	381	11,226	514	0	25,830
Makete	1,458	48,035	1,194	9,014	6,194	37,406	3,013	0	106,313
Njombe	0	55,591	0	3,077	9,786	12,873	1,578	606	83,510
Ludewa	0	25,135	254	498	0	13,999	1,125	2,079	43,090
Iringa Urban	0	223	66	25	0	305	26	0	646
Kilolo	158,301	26,897	0	18,233	2,499	24,449	2,614	484	233,475
Total	166,297	211,493	3,032	35,875	19,581	103,611	12,385	3,169	555,444

ACCESS TO FARM INPUTS AND IMPLEMENTS

12.1.1 ACCESS TO INPUTS: Number of Agricultural Households Using Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Using Chemical Fertilizers		NOT Using Chemical Fertilizers		Total Number of Crop Growing Households
	No. of Households	%	No. of Households	%	
Iringa Rural	15,009	28	37,704	72	52,714
Mufindi	13,525	24	43,241	76	56,766
Njombe	48,461	61	30,443	39	78,904
Ludewa	6,598	27	17,929	73	24,527
Makete	8,150	32	17,077	68	25,227
Iringa Urban	734	63	429	37	1,162
Kilolo	9,040	23	30,509	77	39,549
Total	101,518	36	177,331	64	278,849

12.1.2 ACCESS TO INPUTS: Number of Agricultural Households Using Farm Yard Manure by District, 2002/03 Agricultural Year

District	Using Farm Yard Manure		NOT Using Farm Yard Manure		Total Number of Crop Growing Households
	No. of Households	%	No. of Households	%	
Iringa Rural	9,721	18	42,992	82	52,714
Mufindi	15,411	27	41,355	73	56,766
Njombe	41,307	52	37,465	48	78,772
Ludewa	6,241	25	18,285	75	24,527
Makete	10,415	41	14,812	59	25,227
Iringa Urban	182	16	981	84	1,162
Kilolo	8,746	22	30,803	78	39,549
Total	92,023	33	186,694	67	278,717

12.1.3 ACCESS TO INPUTS: Number of Agricultural Households Using COMPOST Manure by District, 2002/03 Agricultural Year

District	Using COMPOST Manure		NOT Using COMPOST Manure		Total Number of Crop Growing Households
	No. of Households	%	No. of Households	%	
Iringa Rural	6,599	13	46,114	87	52,714
Mufindi	6,962	12	49,805	88	56,766
Njombe	2,645	3	76,127	97	78,772
Ludewa	1,215	5	23,312	95	24,527
Makete	2,442	10	22,785	90	25,227
Iringa Urban	77	7	1,085	93	1,162
Kilolo	3,281	8	36,366	92	39,647
Total	23,221	8	255,594	92	278,815

12.1.4 ACCESS TO INPUTS: Number of Agricultural Households Using Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Using		NOT Using		Total Number of Crop Growing Households
	No. of Households	%	No. of Households	%	
Iringa Rural	13,825	26	38,888	74	52,714
Mufindi	36,062	64	20,705	36	56,766
Njombe	51,087	65	27,684	35	78,772
Ludewa	15,906	65	8,620	35	24,527
Makete	8,199	33	17,028	67	25,227
Iringa Urban	415	36	748	64	1,162
Kilolo	19,110	48	20,439	52	39,549
Total	144,605	52	134,112	48	278,717

12.1.5 ACCESS TO INPUTS: Number of Agricultural Households Using Herbicides by District, 2002/03 Agricultural Year

District	Using Herbicides		NOT Using Herbicides		Total Number of Crop Growing Households
	No. of Households	%	No. of Households	%	
Iringa Rural	1,432	3	51,282	97	52,714
Mufindi	255	0	56,511	100	56,766
Njombe	1,450	2	77,190	98	78,640
Ludewa	121	0	24,406	100	24,527
Makete	0	0	25,227	100	25,227
Iringa Urban	0	0	1,162	100	1,162
Kilolo	290	1	39,355	99	39,645
Total	3,548	1	275,133	99	278,681

12.1.6 ACCESS TO INPUTS: Number of Agricultural Households using Improved Seeds by District, 2002/03 Agricultural Year

District	Using Improved Seeds		NOT Using Improved		Total Number of Crop Growing Households
	No. of Households	%	No. of Households	%	
Iringa Rural	10,253	19	42,460	81	52,714
Mufindi	11,380	20	45,386	80	56,766
Njombe	14,963	19	64,073	81	79,036
Ludewa	2,117	9	22,410	91	24,527
Makete	3,136	12	22,091	88	25,227
Iringa Urban	92	8	1,071	92	1,162
Kilolo	7,978	20	31,573	80	39,551
Total	49,920	18	229,063	82	278,983

Table 12.1.7 ACCESS TO INPUTS: Number of Agricultural Households and Source of Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Co-operative		Local Farmers Group		Local Market / Trade Store		Development Project		Large Scale Farm		Locally Produced by Household		Neighbour		Not applicable		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	0	0	113	0	14,653	28	0	0	0	0	0	0	243	0	37,704	72	52,714
Mufindi	0	0	0	0	13,010	23	129	0	129	0	0	0	0	0	43,241	76	56,766
Njombe	397	1	396	1	45,152	57	0	0	0	0	133	0	1,326	2	30,443	39	78,904
Ludewa	61	0	181	1	5,023	20	61	0	0	0	0	0	121	0	17,929	73	24,527
Makete	0	0	0	0	7,842	31	0	0	0	0	0	0	0	0	17,077	68	25,227
Iringa Urban	0	0	13	1	696	60	0	0	0	0	0	0	12	1	429	37	1,162
Kilolo	0	0	96	0	8,556	22	0	0	0	0	0	0	0	0	30,509	77	39,549
Total	458	0	800	0	94,932	34	189	0	129	0	133	0	1,702	1	177,331	64	278,849

12.1.8 ACCESS TO INPUTS: Number of Agricultural Households and Source of Farm Yard Manure by District, 2002/03 Agricultural Year

District	Local Farmers Group		Secondary Market		Development Project		Crop Buyers		Large Scale Farm		Locally Produced by Household		Neighbour		Other		Not applicable		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	0	0	0	0	0	0	0	0	0	0	4,544	9	4,333	8	0	0	42,992	82	52,714
Mufindi	127	0	0	0	0	0	0	0	129	0	10,362	18	4,417	8	247	0	41,355	73	56,766
Njombe	133	0	133	0	133	0	0	0	1,702	2	29,186	37	8,315	11	0	0	37,465	48	78,772
Ludewa	0	0	0	0	0	0	0	0	0	0	3,634	15	2,244	9	61	0	18,285	75	24,527
Makete	0	0	0	0	0	0	64	0	0	0	7,570	30	2,175	9	487	2	14,812	59	25,227
Iringa Urban	0	0	0	0	0	0	0	0	51	4	79	7	26	2	0	0	981	84	1,162
Kilolo	0	0	0	0	0	0	96	0	98	0	5,923	15	2,533	6	0	0	30,803	78	39,549
Total	260	0	133	0	133	0	160	0	1,980	1	61,297	22	24,043	9	794	0	186,694	67	278,717

12.1.9 ACCESS TO INPUTS: Number of Agricultural Households and Source of COMPOST Manure by District, 2002/03 Agricultural Year

District	Co-operative		Local Market / Trade Store		Locally Produced by Household		Neighbour		Not applicable		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	1,092	2	121	0	4,663	9	238	0	46,114	87	52,714
Mufindi	0	0	127	0	6,834	12	0	0	49,805	88	56,766
Njombe	0	0	132	0	2,512	3	0	0	76,127	97	78,772
Ludewa	0	0	0	0	1,215	5	0	0	23,312	95	24,527
Makete	677	3	185	1	1,273	5	60	0	22,785	90	25,227
Iringa Urban	0	0	0	0	77	7	0	0	1,085	93	1,162
Kilolo	0	0	96	0	2,993	8	192	0	36,366	92	39,647
Total	1,769	1	662	0	19,567	7	491	0	255,594	92	278,815

12.1.10 ACCESS TO INPUTS: Number of Agricultural Households and Source of Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Co-operative		Local Farmers Group		Local Market / Trade Store		Secondary Market		Development Project		Crop Buyers		Large Scale Farm		Locally Produced by Household		Neighbour		Other		Not applicable	Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number		
Iringa Rural	0	0	0	0	9,850	19	1,088	2	0	0	118	0	0	0	2,527	5	243	0	0	0	0	38,888	52,714
Mufindi	256	0	615	1	28,198	50	1,142	2	250	0	129	0	0	0	4,964	9	379	1	129	0	20,705	56,766	
Njombe	397	1	133	0	45,797	58	1,191	2	0	0	263	0	132	0	1,718	2	1,457	2	0	0	27,684	78,772	
Ludewa	244	1	121	0	14,086	57	122	0	122	0	788	3	0	0	302	1	121	0	0	0	8,620	24,527	
Makete	60	0	64	0	4,191	17	254	1	0	0	0	0	0	0	2,135	8	1,314	5	180	1	17,028	25,227	
Iringa Urban	0	0	13	1	388	33	0	0	0	0	0	0	0	0	13	1	0	0	0	0	748	1,162	
Kilolo	96	0	192	0	15,548	39	679	2	0	0	192	0	0	0	769	2	1,634	4	0	0	20,439	39,549	
Total	1,053	0	1,139	0	118,058	42	4,476	2	372	0	1,490	1	132	0	12,427	4	5,149	2	309	0	134,112	278,717	

12.1.11 ACCESS TO INPUTS: Number of Agricultural Households and

District	Local Market / Trade Store	Neighbour		Not applicable		Total
	Number	Number	%	Number	%	
Iringa Rural	1,310	0	0	51,282	97	52,714
Mufindi	255	0	0	56,511	100	56,766
Njombe	1,184	133	0	77,190	98	78,640
Ludewa	121	0	0	24,406	100	24,527
Makete	0	0	0	25,227	100	25,227
Iringa Urban	0	0	0	1,162	100	1,162
Kilolo	192	0	0	39,355	99	39,645
Total	3,063	133	0	275,133	99	278,681

12.1.12 ACCESS TO INPUTS: Number of Agricultural Households Source of Improved Seeds by District, 2002/03 Agricultural Year

District	Co-operative		Local Farmers Group		Local Market / Trade Store		Secondary Market		Development Project		Crop Buyers		Large Scale Farm		Locally Produced by		Neighbour		Not applicable		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	114	0	0	0	7,886	15	0	0	229	0	480	1	0	0	0	0	1,545	3	42,460	81	52,714
Mufindi	0	0	246	0	4,909	9	0	0	257	0	0	0	0	0	5,582	10	386	1	45,386	80	56,766
Njombe	133	0	392	0	9,547	12	265	0	0	0	132	0	0	0	4,228	5	265	0	64,073	81	79,036
Ludewa	0	0	0	0	1,510	6	0	0	61	0	121	0	0	0	61	0	364	1	22,410	91	24,527
Makete	0	0	0	0	1,501	6	0	0	0	0	0	0	0	0	1,323	5	312	1	22,091	88	25,227
Iringa Urban	0	0	13	1	79	7	0	0	0	0	0	0	0	0	0	0	0	0	1,071	92	1,162
Kilolo	96	0	288	1	4,666	12	98	0	0	0	192	0	96	0	1,158	3	1,383	3	31,573	80	39,551
Total	343	0	940	0	30,097	11	363	0	546	0	926	0	96	0	12,352	4	4,256	2	229,063	82	278,983

12.1.13 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total Number
	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	1,291	9	4,668	31	3,107	21	2,971	20	2,973	20	15,009
Mufindi	2,018	15	1,964	15	3,871	29	2,018	15	3,654	27	13,525
Njombe	9,277	19	7,540	16	7,628	16	7,625	16	16,391	34	48,461
Ludewa	1,090	17	1,636	25	1,815	28	481	7	1,575	24	6,598
Makete	2,205	27	1,178	14	1,619	20	1,039	13	2,109	26	8,150
Iringa Urban	12	2	26	4	603	82	93	13	0	0	734
Kilolo	2,249	25	1,442	16	1,351	15	1,081	12	2,918	32	9,040
Total	18,144	18	18,454	18	19,993	20	15,307	15	29,619	29	101,518

12.1.14 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Farm Yard Manure by District, 2002/03 Agricultural Year

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total Number
	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	7,677	79	1,081	11	483	5	238	2	243	2	9,721
Mufindi	13,531	88	1,250	8	508	3	122	1	0	0	15,411
Njombe	37,106	90	2,887	7	398	1	127	0	789	2	41,307
Ludewa	5,451	87	548	9	243	4	0	0	0	0	6,241
Makete	9,986	96	183	2	118	1	128	1	0	0	10,415
Iringa Urban	157	86	12	7	12	7	0	0	0	0	182
Kilolo	7,106	81	963	11	485	6	0	0	192	2	8,746
Total	81,013	88	6,924	8	2,247	2	614	1	1,224	1	92,023

**12.1.15 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of COMPOST Manure by District, 2002/03
Agricultural Year**

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	5756	87	603	9	120	2	120	2	0	0	6599
Mufindi	6576	94	129	2	257	4	0	0	0	0	6962
Njombe	2247	85	265	10	0	0	132	5	0	0	2645
Ludewa	1153	95	61	5	0	0	0	0	0	0	1215
Makete	2074	85	243	10	0	0	62	3	63	3	2442
Iringa Urban	64	83	13	17	0	0	0	0	0	0	77
Kilolo	2702	82	291	9	192	6	96	3	0	0	3281
Total	20572	89	1606	7	569	2	410	2	63	0	23221

**12.1.18 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Improved Seeds by District, 2002/03
Agricultural Year**

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	4,312	42	1,063	10	1,298	13	596	6	2,984	29	10,253
Mufindi	6,692	59	248	2	621	5	514	5	3,305	29	11,380
Njombe	5,769	39	1,661	11	1,987	13	1,583	11	3,963	26	14,963
Ludewa	363	17	725	34	365	17	121	6	544	26	2,117
Makete	1,312	42	0	0	882	28	511	16	432	14	3,136
Iringa Urban	0	0	0	0	39	42	40	43	13	14	92
Kilolo	2,830	35	583	7	487	6	1,185	15	2,893	36	7,978
Total	21,277	43	4,280	9	5,678	11	4,550	9	14,135	28	49,920

**12.1.16 ACCESS TO INPUTS: Number of Agricultural Households and Distance to Source of Pesticides/Fungicides by District, 2002/03
Agricultural Year**

District	Less than 1 km		Between 1 and 3 km		Between 3 and 10 km		Between 10 and 20 km		20 km and Above		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Iringa Rural	2,961	21	2,134	15	3,817	28	2,401	17	2,512	18	13,825	100
Mufindi	10,062	28	3,701	10	8,222	23	3,030	8	11,046	31	36,062	100
Njombe	9,773	19	6,685	13	6,420	13	10,657	21	17,554	34	51,087	100
Ludewa	5,017	32	3,200	20	3,882	24	1,259	8	2,550	16	15,906	100
Makete	3,754	46	696	8	1,683	21	695	8	1,372	17	8,199	100
Iringa Urban	13	3	0	0	309	74	79	19	13	3	415	100
Kilolo	5,133	27	4,421	23	3,756	20	1,653	9	4,147	22	19,110	100
Total	36,714	25	20,837	14	28,087	19	19,774	14	39,193	27	144,605	100

12.1.25 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Chemical Fertilizer by District, 2002/03**Agricultural Year**

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Other		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	1,661	4	29,065	77	597	2	0	0	352	1	5,792	15	236	1	37,704
Mufindi	2,792	6	38,275	89	374	1	0	0	129	0	1,543	4	129	0	43,241
Njombe	389	1	25,829	85	133	0	133	0	133	0	3,562	12	265	1	30,443
Ludewa	2,439	14	12,102	67	0	0	60	0	61	0	3,205	18	61	0	17,929
Makete	745	4	14,777	87	186	1	0	0	188	1	1,181	7	0	0	17,077
Iringa Urban	12	3	416	97	0	0	0	0	0	0	0	0	0	0	429
Kilolo	3,460	11	23,325	76	483	2	96	0	589	2	2,556	8	0	0	30,509
Total	11,499	6	143,789	81	1,772	1	289	0	1,452	1	17,840	10	691	0	177,331

12.1.26 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Farm Yard Manure by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Locally Produced by Household		Other		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	14,563	34	8,787	20	10,360	24	4,552	11	239	1	4,258	10	0	0	234	1	42,992
Mufindi	26,779	65	6,304	15	5,335	13	122	0	1,272	3	1,286	3	0	0	257	1	41,355
Njombe	24,715	66	2,901	8	7,104	19	133	0	387	1	1,573	4	132	0	520	1	37,465
Ludewa	6,484	35	1,701	9	5,096	28	1,267	7	239	1	2,717	15	60	0	721	4	18,285
Makete	6,415	43	3,440	23	3,088	21	245	2	190	1	1,119	8	0	0	315	2	14,812
Iringa Urban	777	79	178	18	12	1	0	0	0	0	12	1	0	0	0	0	981
Kilolo	12,931	42	5,757	19	5,879	19	3,095	10	595	2	2,255	7	96	0	194	1	30,803
Total	92,665	50	29,068	16	36,874	20	9,414	5	2,922	2	13,221	7	288	0	2,242	1	186,694

12.1.27 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using COMPOST Manure by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Locally Produced by		Other		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	1,434	3	3,661	8	21,210	46	6,823	15	7,652	17	5,101	11	0	0	234	1	46,114
Mufindi	2,023	4	5,506	11	27,009	54	2,296	5	8,769	18	3,081	6	487	1	633	1	49,805
Njombe	12,650	17	5,651	7	39,422	52	1,584	2	11,391	15	3,572	5	1,327	2	530	1	76,127
Ludewa	1,700	7	1,757	8	10,911	47	2,240	10	4,048	17	2,291	10	303	1	61	0	23,312
Makete	4,692	21	3,272	14	10,483	46	1,262	6	1,706	7	563	2	0	0	808	4	22,785
Iringa Urban	182	17	51	5	662	61	12	1	100	9	40	4	0	0	37	3	1,085
Kilolo	2,167	6	3,674	10	22,189	61	2,168	6	3,421	9	2,346	6	305	1	96	0	36,366
Total	24,850	10	23,571	9	131,885	52	16,386	6	37,088	15	16,993	7	2,422	1	2,400	1	255,594

12.1.28 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Locally Produced by Household		Other		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	940	2	27,734	71	1,088	3	2,894	7	655	2	5,338	14	0	0	238	1	38,888
Mufindi	1,531	7	15,589	75	385	2	0	0	632	3	2,309	11	0	0	257	1	20,705
Njombe	1,977	7	21,890	79	261	1	0	0	664	2	2,892	10	0	0	0	0	27,684
Ludewa	3,583	42	3,700	43	184	2	0	0	120	1	1,035	12	0	0	0	0	8,620
Makete	1,451	9	13,255	78	123	1	0	0	251	1	1,760	10	64	0	123	1	17,028
Iringa Urban	12	2	659	88	12	2	0	0	12	2	51	7	0	0	0	0	748
Kilolo	2,697	13	13,341	65	688	3	96	0	689	3	2,927	14	0	0	0	0	20,439
Total	12,192	9	96,169	72	2,742	2	2,990	2	3,023	2	16,313	12	64	0	618	0	134,112

12.1.29 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Herbicides by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Other		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	1,549	3	21,269	41	1,437	3	3,014	6	5,937	12	17,719	35	358	1	51,282
Mufindi	4,511	8	36,005	64	1,005	2	0	0	6,411	11	8,194	15	386	1	56,511
Njombe	3,565	5	50,500	65	1,323	2	133	0	11,070	14	10,598	14	0	0	77,190
Ludewa	3,398	14	12,655	52	304	1	122	1	2,292	9	5,636	23	0	0	24,406
Makete	1,825	7	16,773	66	248	1	0	0	1,458	6	4,677	19	246	1	25,227
Iringa Urban	0	0	805	69	0	0	12	1	153	13	180	15	12	1	1,162
Kilolo	5,709	15	17,196	44	385	1	192	0	7,384	19	8,194	21	294	1	39,355
Total	20,556	7	155,202	56	4,702	2	3,474	1	34,705	13	55,198	20	1,296	0	275,133

12.1.30 ACCESS TO INPUTS: Number of Agricultural Households and Reason for NOT using Improved Seeds by District, 2002/03 Agricultural Year

District	Not Available		Price Too High		No Money to Buy		Too Much Labour Required		Do not Know How to Use		Input is of No Use		Produced by Household		Other		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	3,569	8	33,436	79	711	2	121	0	724	2	3,781	9	0	0	118	0	42,460
Mufindi	6,035	13	37,321	82	745	2	0	0	385	1	771	2	0	0	129	0	45,386
Njombe	6,152	10	53,475	83	530	1	0	0	264	0	3,387	5	133	0	132	0	64,073
Ludewa	4,017	18	15,976	71	365	2	0	0	716	3	1,336	6	0	0	0	0	22,410
Makete	2,581	12	17,432	79	63	0	0	0	380	2	1,324	6	0	0	310	1	22,091
Iringa Urban	12	1	956	89	0	0	0	0	25	2	77	7	0	0	0	0	1,071
Kilolo	5,199	16	24,821	79	580	2	0	0	198	1	293	1	290	1	192	1	31,573
Total	27,565	12	183,417	80	2,994	1	121	0	2,693	1	10,970	5	423	0	880	0	229,063

12.1.31 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Does not Work		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	3,225	21	10,717	71	946	6	0	0	121	1	15,009
Mufindi	2,744	20	9,119	67	1,405	10	127	1	129	1	13,525
Njombe	9,913	20	32,350	67	5,403	11	531	1	264	1	48,461
Ludewa	1,695	26	4,420	67	362	5	60	1	60	1	6,598
Makete	1,789	22	5,288	65	888	11	61	1	125	2	8,150
Iringa Urban	78	11	540	74	116	16	0	0	0	0	734
Kilolo	3,591	40	4,765	53	685	8	0	0	0	0	9,040
Total	23,036	23	67,199	66	9,804	10	779	1	699	1	101,518

12.1.32 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Farm Yard Manure by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Total
	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	2,036	21	6,960	72	725	7	0	0	9,721
Mufindi	6,983	45	7,927	51	501	3	0	0	15,411
Njombe	13,166	32	24,613	60	3,396	8	132	0	41,307
Ludewa	1,577	25	3,995	64	669	11	0	0	6,241
Makete	2,656	26	6,071	58	1,562	15	125	1	10,415
Iringa Urban	39	21	90	49	40	22	13	7	182
Kilolo	5,459	62	2,999	34	288	3	0	0	8,746
Total	31,917	35	52,654	57	7,181	8	270	0	92,023

12.1.33 ACCESS TO INPUTS: Number of Agricultural Households and Quality of COMPOST Manure by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Total
	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	2,051	31	2,758	42	1,790	27	0	0	6,599
Mufindi	2,146	31	4,190	60	625	9	0	0	6,962
Njombe	1,585	60	530	20	530	20	0	0	2,645
Ludewa	183	15	727	60	305	25	0	0	1,215
Makete	678	28	931	38	769	31	64	3	2,442
Iringa Urban	0	0	26	33	52	67	0	0	77
Kilolo	870	27	2,114	64	297	9	0	0	3,281
Total	7,513	32	11,276	49	4,367	19	64	0	23,221

12.1.34 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Pesticides/Fungicides by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Does not Work		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	2,263	16	10,240	74	1,322	10	0	0	0	0	13,825
Mufindi	10,366	29	23,670	66	1,768	5	129	0	129	0	36,062
Njombe	6,583	13	40,015	78	4,357	9	0	0	132	0	51,087
Ludewa	2,595	16	12,344	78	967	6	0	0	0	0	15,906
Makete	1,491	18	6,262	76	447	5	0	0	0	0	8,199
Iringa Urban	38	9	364	88	12	3	0	0	0	0	415
Kilolo	6,942	36	11,784	62	385	2	0	0	0	0	19,110
Total	30,279	21	104,679	72	9,257	6	129	0	261	0	144,605

12.1.35 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Herbicides by District, 2002/03 Agricultural Year

District	Good		Total
	Number	%	Number
Mufindi	255	100	255
Ludewa	121	100	121
Kilolo	290	100	290
Total	2,551	72	3,548

12.1.36 ACCESS TO INPUTS: Number of Agricultural Households and Quality of Improved Seeds by District, 2002/03 Agricultural Year

District	Excellent		Good		Average		Poor		Total
	Number	%	Number	%	Number	%	Number	%	Number
Iringa Rural	2,879	28	7,253	71	121	1	0	0	10,253
Mufindi	1,775	16	8,972	79	505	4	127	1	11,380
Njombe	3,440	23	8,096	54	3,427	23	0	0	14,963
Ludewa	659	31	1,397	66	61	3	0	0	2,117
Makete	631	20	2,317	74	188	6	0	0	3,136
Iringa Urban	40	43	52	57	0	0	0	0	92
Kilolo	4,065	51	2,353	29	589	7	971	12	7,978
Total	13,490	27	30,441	61	4,891	10	1,099	2	49,920

12.1.37 ACCESS TO INPUTS: Number of Agricultural Households With Plan to use Next Year Chemical Fertilizer by District, 2002/03 Agricultural Year

District	Agricultural Households With Plan to use Next Year		Agricultural Households With NO Plan to use Next		Total
	Number	%	Number	%	Number
Iringa Rural	17887	34	34827	66	52714
Mufindi	21764	38	35002	62	56766
Njombe	54604	69	24299	31	78904
Ludewa	9321	38	15206	62	24527
Makete	9108	36	16119	64	25227
Iringa Urban	812	70	350	30	1162
Kilolo	13302	34	26247	66	39549
Total	126798	45	152050	55	278849

AGRICULTURE CREDIT

13.1a AGRICULTURE CREDIT: Number of Households Reporting the Main Reason for Not Using Credit By District during the 2002/03 Agricultural Year

District	Not needed	Not available	Did not want to go into debt	Interest rate/cost too high	Did not know how to get credit	Difficult bureaucracy procedure	Credit granted too late	Other	Don't know about credit	Total
Iringa Rural	1,780	16,866	5,232	2,266	17,884	1,563	840	241	5,921	52,592
Mufindi	2,148	15,142	7,985	2,330	16,694	627	129	366	10,844	56,263
Makete	1,047	34,974	6,293	2,198	15,025	625	1,050	132	10,722	72,067
Njombe	609	7,536	2,846	1,860	6,056	419	122	184	3,805	23,436
Ludewa	950	8,729	4,343	371	5,327	128	120	123	4,707	24,799
Iringa Urban	0	194	222	40	439	39	65	0	165	1,162
Kilolo	678	10,482	2,828	963	11,725	2,580	1,091	395	8,608	39,351
Total	7,212	93,923	29,749	10,028	73,149	5,981	3,416	1,441	44,772	269,671

13.1b AGRICULTURE CREDIT: Number of Credits Received By Main Purpose of Credit and District

District	Labour	Seeds	Fertilizers	Agro-chemicals	Tools / Equipment	Livestock	Other	Total Credits
Iringa Rural	0	0	0	0	0	0	121	121
Mufindi	129	129	118	0	129	0	128	632
Makete	3,039	2,232	1,447	626	132	398	0	7,874
Njombe	302	243	484	546	61	122	183	1,942
Ludewa	121	62	184	0	0	123	0	490
Kilolo	198	0	0	0	0	0	0	198
Total Credits	3,789	2,666	2,232	1,172	322	644	432	11,257

13.2a AGRICULTURE CREDIT: Number of Households Receiving Credit By Sex of Household head and District during the 2002/03 Agricultural Year

District	Male		Female		Total
	Number	%	Number	%	Number
Iringa Rural	121	100	0	0	121
Mufindi	503	100	0	0	503
Makete	5,246	78	1,459	22	6,705
Njombe	606	56	485	44	1,091
Ludewa	121	28	307	72	428
Kilolo	198	100	0	0	198
Total	6,796	75	2,251	25	9,046

13.2b AGRICULTURE CREDIT: Number of Households Receiving Credit By Source of Credit By District

District	Family, Friend and Relative	Co-operative	Saving & Credit Society	Trader / Trade Store	Private Individual	Religious Organisation / NGO / Project	Other	Total
Iringa Rural	121	0	0	0	0	0	0	121
Mufindi	0	0	0	129	129	246	0	503
Makete	5,031	0	133	360	385	265	531	6,705
Njombe	481	0	61	245	60	244	0	1,091
Ludewa	62	62	60	0	0	122	123	428
Kilolo	0	0	0	0	0	198	0	198
Total	5,694	62	254	734	574	1,075	654	9,046

TREE FARMING AND AGROFORESTRY

14 ON FARM TREE PLANTING: Number of Planted Trees By Species and District during the Year 2002/03 Agricultural Year, Iringa region.

District	Senna Spp	Gravellia	Azalia Quanzensis	Acacia Spp	Pinus Spp	Eucalyptus Spp	Cyprus Spp	Melicia excelsa
Iringa Rural	14,059	.	.	4,854	5,992	542,593	43,892	.
Mufindi	.	155,032	.	257,249	7,997,374	1,070,195	5,145	.
Makete	3,051	290,684	.	730,015	15,527,173	1,407,546	2,183,578	.
Njombe	11,905	17,624	970	.	1,676,695	632,250	102,444	3,059
Ludewa	.	1,276	.	44,803	3,942,575	1,057,947	1,921,278	.
Kilolo	2,175	104,523	9,611	.	4,753,539	1,239,976	228,701	.
Total	31,190	569,138	10,582	1,036,921	33,903,348	5,950,507	4,485,037	3,059

cont.....ON FARM TREE PLANTING: Number of Planted Trees By Species and District during the Year 2002/03 Agricultural Year, Iringa region.

Tectona Grandis	Terminalia Ivorenensis	Leucena Spp	Syzgium Spp	Azadritachta Spp	Jakaranda Spp	Sesbania Spp	Calliandra Spp	Moringa Spp
.	.	.	.	1,208	120	.	.	.
.	236	19,105	.
.	.	775,001	4,774	17,918	1,581	132	77,577	790
1,819	.	.	6,081	1,455
.	.	492
.	.	.	.	6,311	.	.	.	18,038
1,819	236	775,493	10,855	26,893	1,701	132	96,683	18,828

14.2 TREE FARMING: Number of Households with Planted Trees on their Land and and Number of Trees by Planting Location and District during the 2002/03 Agricultural year - Iringa Region

District	Mostly on Field / Plot Boundaries		Mostly Scattered in Field		Mostly in Plantation / Coppice		Total	
	Number of Households	Number of Trees	Number of Households	Number of Trees	Number of Households	Number of Trees	Number of Households	Number of Trees
Iringa Rural	1,803	67,815	702	373,648	957	171,256	3,461	612,718
Mufindi	2,133	209,101	379	100,444	10,802	9,194,791	13,314	9,504,336
Makete	5,620	472,062	3,031	882,091	19,578	19,663,039	28,229	21,017,192
Njombe	1,395	243,640	722	145,595	4,962	2,065,068	7,079	2,454,303
Ludewa	1,376	257,837	821	386,212	5,522	6,324,322	7,719	6,968,372
Kilolo	2,896	485,825	297	6,441	8,276	5,870,608	11,469	6,362,875
Total	15,223	1,736,279	5,952	1,894,431	50,096	43,289,085	71,271	46,919,796

14 TREE FARMING: Number of Responses by main use of planted tree and District for the 2002/03 agricultural year, Iringa region
Use of Trees By District

District	Planks / Timber	Poles	Charcoal	Fuel for Wood	Shade	Medicinal	Other	Total
Iringa Rural	1,066	1,203	0	714	596	121	121	3,822
Mufindi	13,538	1,137	0	1,276	0	0	119	16,069
Makete	26,144	2,368	265	3,400	133	0	768	33,078
Njombe	6,775	782	122	1,026	0	0	0	8,705
Ludewa	6,104	188	0	2,358	64	64	64	8,842
Kilolo	12,326	1,172	96	1,544	961	291	297	16,687
Total	65,953	6,850	484	10,319	1,753	476	1,369	87,204

District during the 2002/03 Agricultural Year, Iringa Region

District	Distance to Community Planted Forest (km)						Total
	1-9	1-19	20-29	30-39	40-49	60+	
Iringa Rural	7,945	1,806	1,784	2,570	1,310	3,986	19,401
Mufindi	3,279	4,362	1,279	128	0	506	9,554
Makete	13,610	4,896	5,259	4,715	2,594	5,964	37,037
Njombe	3,969	2,670	1,514	605	363	667	9,788
Ludewa	5,221	1,513	1,520	678	424	886	10,241
Kilolo	5,405	1,346	1,922	1,153	673	1,057	11,557
Total	39,429	16,592	13,278	9,849	5,364	13,066	97,579

14 TREE FARMING: Main Use of Trees By District

District	Main Use							Total
	Planks / Timber	Poles	Charcoal	Fuel for Wood	Shade	Medicinal	Other	
Iringa Rural	1,066	1,203	0	714	596	121	121	3,822
Mufindi	13,538	1,137	0	1,276	0	0	119	16,069
Makete	26,144	2,368	265	3,400	133	0	768	33,078
Njombe	6,775	782	122	1,026	0	0	0	8,705
Ludewa	6,104	188	0	2,358	64	64	64	8,842
Kilolo	12,326	1,172	96	1,544	961	291	297	16,687
Total	65,953	6,850	484	10,319	1,753	476	1,369	87,204

14 TREE FARMING: Second Use of Trees By District

District	Second Use							Total
	Planks / Timber	Poles	Charcoal	Fuel for Wood	Shade	Medicinal	Other	
Iringa Rural	364	601	0	2,618	240	0	0	3,822
Mufindi	1,021	1,639	0	13,165	0	127	119	16,069
Makete	2,888	5,560	530	22,789	397	265	648	33,078
Njombe	1,084	1,750	181	5,569	61	0	61	8,705
Ludewa	558	1,688	555	5,667	250	0	0	8,717
Kilolo	1,250	2,612	96	12,141	198	102	288	16,687
Total	7,164	13,849	1,362	61,948	1,145	495	1,116	87,079

CROP EXTENSION

**15.1 CROP EXTENSION" Number of Households Receiving Extension Messages
By District**

District	Households Receiving Extension Advice		Households Not Receiving Extension Advice		Total number of Households
	Number	%	Number	%	
Iringa Rural	41,792	79	10,921	21	52,714
Mufindi	15,506	27	41,260	73	56,766
Makete	64,369	82	14,402	18	78,772
Njombe	12,533	51	11,994	49	24,527
Ludewa	11,125	44	14,102	56	25,227
Iringa Urban	659	57	503	43	1,162
Kilolo	33,312	84	6,237	16	39,549
Total	179,297	64	99,420	36	278,717

15.1 CROP EXTENSION: Number of Households By Quality of Extension Services By District

District	Very Good		Good		Average		Poor		No Good		Number of Households
	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	5,756	15.0	27,595	71.9	4,302	11.2	476	1.2	240	0.6	38,370
Mufindi	1,504	10.0	12,869	85.8	626	4.2	0	0.0	0	0.0	14,998
Makete	9,603	14.9	46,720	72.6	5,132	8.0	1,988	3.1	926	1.4	64,369
Njombe	2,724	21.7	8,472	67.6	1,216	9.7	122	1.0	0	0.0	12,533
Ludewa	2,035	18.4	8,281	74.9	746	6.7	0	0.0	0	0.0	11,062
Iringa Urban	78	12.0	492	76.1	77	11.9	0	0.0	0	0.0	646
Kilolo	10,837	32.6	19,154	57.7	2,933	8.8	194	0.6	98	0.3	33,216
Total	32,536	18.6	123,583	70.5	15,031	8.6	2,780	1.6	1,264	0.7	175,194

15.2 EXTENSION MESSAGES: Number of Households By Source of Extension Messages By District

District	Government		NGO / Development		Cooperative		Large Scale Farm		Other		Not applicable		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	40,768	99.0	175	0.4	0	0.0	0	0.0	0	0.0	243	0.6	41,186
Mufindi	13,425	86.6	478	3.1	0	0.0	742	4.8	0	0.0	861	5.6	15,506
Makete	58,985	91.8	1,184	1.8	0	0.0	1,716	2.7	1,821	2.8	531	0.8	64,237
Njombe	10,290	84.1	1,817	14.9	0	0.0	61	0.5	0	0.0	61	0.5	12,229
Ludewa	10,319	94.9	124	1.1	61	0.6	186	1.7	125	1.1	62	0.6	10,876
Iringa Urban	556	84.3	0	0.0	13	2.0	77	11.7	13	1.9	0	0.0	659
Kilolo	31,484	94.5	962	2.9	0	0.0	289	0.9	96	0.3	481	1.4	33,312
Total	165,826	93.2	4,740	2.7	74	0.0	3,072	1.7	2,055	1.2	2,238	1.3	178,005

15.4: EXTENSION MESSAGES: Number of Households By Receiving Advice on Plant Spacing By Source and District during the 2002/03 Agricultural Year, Iringa Region

District	Spacing							Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Iringa Rural	38,266	175	0	0	0	243	38,684	52,714	73
Mufindi	12,425	118	0	742	0	743	14,028	56,766	25
Makete	50,006	919	0	792	1,293	398	53,408	78,772	68
Njombe	8,343	1,087	0	61	0	61	9,552	24,527	39
Ludewa	9,872	63	61	121	125	62	10,304	25,227	41
Iringa Urban	401	0	13	65	13	0	492	1,162	42
Kilolo	28,440	962	0	289	96	384	30,171	39,549	76
Total	147,753	3,324	74	2,070	1,526	1,891	156,639	278,717	56

15.5: EXTENSION MESSAGES: Number of Households By Receiving Advice on Use of Agrochemical By Source and District during the 2002/03 Agricultural Year, Iringa Region

District	Use of Agrochemicals							Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Iringa Rural	21,492	119	0	241	121	485	22,459	52,714	42.6
Mufindi	12,136	370	0	123	0	0	12,629	56,766	22.2
Makete	39,864	1,841	0	1,056	1,160	1,187	45,107	78,772	57.3
Njombe	5,997	1,933	61	61	0	0	8,051	24,527	32.8
Ludewa	2,991	63	0	61	0	61	3,176	25,227	12.6
Iringa Urban	116	0	0	39	0	0	155	1,162	13.3
Kilolo	15,513	2,981	96	192	0	1,057	19,839	39,549	50.2
Total	98,108	7,307	157	1,774	1,281	2,791	111,418	278,717	40.0

15.6: EXTENSION MESSAGES: Number of Households By Receiving Advice on Erosion Control By Source and District during the 2002/03 Agricultural Year, Iringa Region

District	Erosion Control							Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Iringa Rural	20,132	239	0	241	0	485	21,098	52,714	40.0
Mufindi	9,240	118	0	123	0	1,361	10,843	56,766	19.1
Makete	36,531	2,245	0	132	529	657	40,093	78,772	50.9
Njombe	4,244	3,930	60	0	0	122	8,355	24,527	34.1
Ludewa	5,332	186	0	0	0	312	5,831	25,227	23.1
Iringa Urban	64	0	0	0	0	0	64	1,162	5.5
Kilolo	18,862	5,490	0	0	0	675	25,027	39,549	63.3
Total	94,406	12,207	60	497	529	3,612	111,311	278,717	39.9

15.7 EXTENSION MESSAGES: Number of Households By Receiving Advice on Organic Fertiliser Use By Source and District during the 2002/03 Agricultural Year, Iringa Region

District	Organic Fertilizer Use							Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Iringa Rural	23,369	234	121	243	0	484	24,451	52,714	46.4
Mufindi	11,657	494	0	247	0	1,232	13,630	56,766	24.0
Makete	41,187	2,639	132	1,319	1,305	663	47,245	78,772	60.0
Njombe	4,119	3,325	0	61	0	181	7,685	24,527	31.3
Ludewa	5,037	256	0	0	64	191	5,547	25,227	22.0
Iringa Urban	219	0	13	26	0	0	258	1,162	22.2
Kilolo	19,213	3,373	0	0	0	1,447	24,033	39,549	60.8
Total	104,800	10,321	266	1,895	1,369	4,197	122,849	278,717	44.1

15.8 EXTENSION MESSAGES: Number of Households By Receiving Advice on Plant Spacing By Source and District during the 2002/03 Agricultural Year, Iringa Region

District	Inorganic Fertilizer Use							Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Iringa Rural	19,935	360	0	243	0	607	21,145	52,714	40.1
Mufindi	10,114	119	0	247	0	1,119	11,599	56,766	20.4
Makete	40,403	529	132	1,054	658	265	43,042	78,772	54.6
Njombe	4,771	725	0	61	0	121	5,679	24,527	23.2
Ludewa	2,922	125	61	61	61	61	3,290	25,227	13.0
Iringa Urban	243	0	0	39	0	0	282	1,162	24.3
Kilolo	11,860	1,458	195	96	0	2,126	15,735	39,549	39.8
Total	90,248	3,317	387	1,801	719	4,300	100,771	278,717	36.2

15.9 EXTENSION MESSAGES: Number of Households By Receiving Advice on Use of Improved Seed By Source and District during the 2002/03 Agricultural Year, Iringa Region

District	Use of Improved Seed							Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Iringa Rural	28,172	241	119	121	0	602	29,256	52,714	55.5
Mufindi	11,385	247	129	123	0	743	12,627	56,766	22.2
Makete	36,776	1,324	264	526	775	0	39,664	78,772	50.4
Njombe	6,040	1,210	0	61	0	61	7,371	24,527	30.1
Ludewa	3,796	442	62	125	186	568	5,177	25,227	20.5
Iringa Urban	128	0	26	39	0	0	192	1,162	16.6
Kilolo	19,416	2,987	96	288	0	1,252	24,039	39,549	60.8
Total	105,713	6,450	695	1,284	961	3,225	118,327	278,717	42.5
%	89	5	1	1	1	3	100		

15.10 EXTENSION MESSAGES: Number of Households By Receiving Advice on Mechanisation/LST By Source and District during the 2002/03 Agricultural Year, Iring Region

District	Mechanisation / LST						Total	Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable			
Iringa Rural	7,450	121	121	241	0	484	8,418	52,714	16.0
Mufindi	2,166	118	129	123	0	1,238	3,774	56,766	6.6
Makete	5,081	133	132	0	2,244	492	8,081	78,772	10.3
Njombe	664	241	0	0	0	0	906	24,527	3.7
Ludewa	188	0	0	0	0	125	313	25,227	1.2
Iringa Urban	26	0	0	0	0	0	26	1,162	2.2
Kilolo	4,196	486	97	0	0	1,826	6,606	39,549	16.7
Total	19,770	1,100	479	365	2,244	4,164	28,122	278,717	10.1

15.11 EXTENSION MESSAGES: Number of Households By Receiving Advice on Irrigation Technology By Source and District during the 2002/03 Agricultural Year, Iring Region

District	Irrigation Technology						Total	Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable			
Iringa Rural	14,944	0	0	243	121	121	15,429	52,714	29.3
Mufindi	3,557	0	0	123	0	1,488	5,168	56,766	9.1
Makete	12,019	777	0	658	2,777	120	16,351	78,772	20.8
Njombe	1,624	840	61	0	0	181	2,706	24,527	11.0
Ludewa	381	0	0	0	0	186	567	25,227	2.2
Iringa Urban	0	0	0	26	0	0	26	1,162	2.2
Kilolo	6,523	1,263	96	0	0	2,210	10,093	39,549	25.5
Total	39,047	2,880	157	1,050	2,898	4,307	50,339	278,717	18.1

15.12 EXTENSION MESSAGES: Number of Households By Receiving Advice on Crop storage By Source and District during the 2002/03 Agricultural Year, Iring Region

District	Crop Storage						Total	Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable			
Iringa Rural	26,954	241	0	121	364	238	27,918	52,714	53.0
Mufindi	10,885	248	0	123	0	1,238	12,493	56,766	22.0
Makete	29,871	1,456	131	658	3,152	0	35,268	78,772	44.8
Njombe	6,055	2,409	61	61	0	242	8,828	24,527	36.0
Ludewa	5,465	0	0	0	0	0	5,465	25,227	21.7
Iringa Urban	116	0	13	39	0	0	169	1,162	14.5
Kilolo	21,992	4,240	0	192	0	577	27,001	39,549	68.3
Total	101,337	8,593	206	1,195	3,516	2,294	117,141	278,717	42.0

15.13 EXTENSION MESSAGES: Number of Households By Receiving Advice on Vermin Control By Source and District during the 2002/03 Agricultural Year, Iring Region

District	Vermin Control						Total	Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable			
Iringa Rural	13,744	241	0	0	482	118	14,585	52,714	27.7
Mufindi	5,026	0	0	0	0	1,366	6,392	56,766	11.3
Makete	14,264	915	0	131	2,770	392	18,472	78,772	23.4
Njombe	3,201	665	61	0	0	60	3,988	24,527	16.3
Ludewa	2,136	64	62	0	0	64	2,325	25,227	9.2
Iringa Urban	0	0	0	0	0	0	0	1,162	0.0
Kilolo	6,917	2,700	96	0	0	2,115	11,828	39,549	29.9
Total	45,288	4,586	219	131	3,252	4,114	57,590	278,717	20.7
%	78.6	8.0	0.4	0.2	5.6	7.1	100		

15.14 EXTENSION MESSAGES: Number of Households By Receiving Advice on Agro - Processing By Source and District during the 2002/03 Agricultural Year, Iring Region

District	Agro-progressing						Total	Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable			
Iringa Rural	11,768	476	239	361	604	118	13,566	52,714	25.7
Mufindi	7,088	247	375	123	0	1,114	8,947	56,766	15.8
Makete	13,364	4,468	132	395	4,196	397	22,952	78,772	29.1
Njombe	2,836	1,150	61	0	0	61	4,108	24,527	16.7
Ludewa	2,314	63	0	0	0	64	2,441	25,227	9.7
Iringa Urban	0	0	0	0	0	0	0	1,162	0.0
Kilolo	7,567	1,256	96	0	0	2,406	11,325	39,549	28.6
Total	44,937	7,659	904	880	4,799	4,160	63,339	278,717	22.7

15.15 EXTENSION MESSAGES: Number of Households By Receiving Advice on Agro- Forestry By Source and District during the 2002/03 Agricultural Year, Iring Region

District	Agro-forestry							Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Other	Not applicable	Total		
Iringa Rural	12,004	2,148	0	241	121	485	15,000	52,714	28.5
Mufindi	8,237	378	129	0	0	1,365	10,108	56,766	17.8
Makete	17,150	3,117	133	792	789	637	22,618	78,772	28.7
Njombe	1,514	1,871	61	61	0	61	3,567	24,527	14.5
Ludewa	1,254	0	0	0	0	125	1,379	25,227	5.5
Iringa Urban	0	0	0	0	0	0	0	1,162	0.0
Kilolo	9,836	2,598	0	0	0	2,115	14,549	39,549	36.8
Total	49,994	10,112	323	1,094	911	4,787	67,222	278,717	24.1
%	74.4	15.0	0.5	1.6	1.4	7.1	100.0		

15.16 EXTENSION MESSAGES: Number of Households By Receiving Advice on Beekeeping By Source and District during the 2002/03 Agricultural Year, Iring Region

District	Beekeeping						Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total		
Iringa Rural	2,837	2,243	120	0	121	5,321	52,714	10.1
Mufindi	1,763	128	0	0	1,238	3,128	56,766	5.5
Makete	1,309	3,092	0	133	379	4,913	78,772	6.2
Njombe	909	2,659	61	0	60	3,689	24,527	15.0
Ludewa	506	61	0	0	64	631	25,227	2.5
Iringa Urban	0	0	0	0	0	0	1,162	0.0
Kilolo	5,783	2,788	96	0	2,211	10,877	39,549	27.5
Total	13,108	10,970	277	133	4,072	28,560	278,717	10.2

15.17 EXTENSION MESSAGES: Number of Households By Receiving Advice on Fish Farming By Source and District during the 2002/03 Agricultural Year, Iringa Region

District	Fish Farming						Total number of households	% of total number of households
	Government	NGO / Development Project	Cooperative	Large Scale Farm	Not applicable	Total		
Iringa Rural	943	1,669	120	0	241	2,973	52,714	5.6
Mufindi	3,439	129	0	0	1,238	4,805	56,766	8.5
Makete	896	2,432	133	133	385	3,978	78,772	5.1
Njombe	1,027	2,961	61	0	0	4,049	24,527	16.5
Ludewa	627	126	0	0	64	816	25,227	3.2
Iringa Urban	0	0	0	0	0	0	1,162	0.0
Kilolo	4,436	2,980	0	0	2,499	9,915	39,549	25.1
Total	11,368	10,295	314	133	4,427	26,536	278,717	9.5

15.18 EXTENSION MESSAGES: Number of Households By Receiving and Adopting Extension Messages By Type of Message and District for the 2002/03 agricultural year Iringa region

District	Spacing			Use of Agrochemicals			Erosion Control		
	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Iringa Rural	38,800	36,194	93	22,335	13,996	63	20,735	13,932	67
Mufindi	13,286	11,999	90	12,758	11,478	90	9,226	4,558	49
Makete	53,010	46,823	88	43,902	33,079	75	39,062	22,332	57
Njombe	9,612	9,374	98	8,113	6,478	80	8,294	6,120	74
Ludewa	10,304	9,045	88	3,115	1,787	57	5,706	3,257	57
Iringa Urban	492	441	90	155	130	84	64	64	100
Kilolo	29,787	28,908	97	18,388	13,129	71	24,739	17,712	72
Total	155,290	142,784	92	108,765	80,078	74	107,826	67,974	63

15.19 EXTENSION MESSAGES: Number of Households By Receiving and Adopting Extension Messages By Type of Message and District for the 2002/03 agricultural year Iringa region

District	Organic Fertilizer Use			Inorganic Fertilizer Use			Use of Improved Seed		
	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Iringa Rural	23,978	14,256	59	20,421	12,654	62	29,136	15,992	55
Mufindi	12,386	8,066	65	10,480	5,956	57	12,257	6,861	56
Makete	46,581	31,098	67	41,717	33,272	80	39,151	16,583	42
Njombe	7,685	4,899	64	5,619	3,927	70	7,310	3,263	45
Ludewa	5,420	3,967	73	3,292	2,854	87	5,177	2,722	53
Iringa Urban	233	132	56	294	257	87	206	65	32
Kilolo	22,388	11,682	52	13,323	7,862	59	23,174	11,784	51
Total	118,670	74,101	62	95,146	66,783	70	116,411	57,271	49

15.20 EXTENSION MESSAGES: Number of Households By Receiving and Adopting Extension Messages By Type of Message and District for the 2002/03 agricultural year Iringa region

District	Mechanisation / LST			Irrigation Technology			Crop Storage		
	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Iringa Rural	7,809	1,867	24	14,583	10,078	69	27,219	24,940	92
Mufindi	2,279	1,399	61	3,310	2,565	77	11,129	11,256	101
Makete	6,325	1,184	19	15,107	10,241	68	34,750	33,429	96
Njombe	906	121	13	2,464	1,450	59	8,766	8,344	95
Ludewa	188	0	0	316	188	59	5,588	4,514	81
Iringa Urban	26	26	100	64	64	100	169	130	77
Kilolo	4,299	2,518	59	7,590	6,726	89	26,424	24,873	94
Total	21,830	7,115	33	43,435	31,311	72	114,044	107,485	94

15.21 EXTENSION MESSAGES: Number of Households By Receiving and Adopting Extension Messages By Type of Message and District for the 2002/03 agricultural year Iringa region

District	Vermin Control			Agro-progressing			Agro-forestry		
	Received	Adopted	%	Received	Adopted	%	Received	Adopted	%
Iringa Rural	13,516	11,862	88	12,724	11,156	52	14,636	6,455	44
Mufindi	5,026	4,419	88	7,833	6,676	267	8,743	3,714	42
Makete	17,726	11,858	67	22,074	20,898	16	22,244	12,377	56
Njombe	3,746	4,109	110	3,926	3,622	46	3,507	1,752	50
Ludewa	2,261	1,567	69	2,260	1,816	1	1,254	1,067	85
Iringa Urban	0	13	0	0	26	0	0	0	0
Kilolo	8,656	7,004	81	8,631	8,621	612	12,531	8,331	66
Total	50,932	40,832	80	57,448	52,815	0	62,915	33,696	54

15.22 EXTENSION MESSAGES: Number of Households By Receiving and Adopting Extension Messages By Type of Message and District for the 2002/03 agricultural year Iringa region

District	Beekeeping			Fish Farming			Other		
	Received Advice	Adopted Message	%	Received Advice	Adopted Message	%	Received Advice	Adopted Message	%
Iringa Rural	4,123	354	9	2,491	121	5	604	243	40
Mufindi	1,763	624	35	3,440	1,146	33	0	129	0
Makete	4,149	793	19	3,360	133	4	647	516	80
Njombe	3,629	1,273	35	3,988	1,512	38	730	670	92
Ludewa	506	124	24	691	308	45	316	188	59
Iringa Urban	0	0	0	0	0	0	0	0	0
Kilolo	8,667	1,635	19	7,704	865	11	385	289	75
Total	22,838	4,803	21	21,674	4,086	19	2,682	2,034	76

ANIMAL CONTRIBUTION TO CROP PRODUCTION

17.1 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Number of Households Using Draft Animal to Cultivate Land By District during 2002/03 agricultural year, Iringa Region.

District	Using Draft Animals		Not Using Draft Animals		Total households
	No of households	%	No of households	%	
Iringa Rural	10,693	20	42,021	80	52,714
Mufindi	16,466	29	40,300	71	56,766
Makete	39,300	50	39,472	50	78,772
Njombe	5,441	22	19,086	78	24,527
Ludewa	361	1	24,866	99	25,227
Iringa Urban	64	6	1,098	94	1,162
Kilolo	13,780	35	25,769	65	39,549
Total	86,105	31	192,612	69	278,717

17.2 ANIMAL CONTRIBUTION TO CROP PRODUCTION: Type of Draft by number owned, used and area cultivated (acres) by Number Owned, Used and area Cultivated (acres) by District during 2002/03 agricultural year, Iringa Region.

District	Type of draft					
	Oxen			Total		
	Number Owned	Number Used	Area Cultivated (Hectares)	Number Owned	Number Used	Cultivated (Acres)
Iringa Rural	13,048	30,727	17,380	13,048	30,727	17,380
Mufindi	21,803	42,094	25,800	21,803	42,094	25,800
Makete	47,277	98,631	50,434	47,277	98,631	50,434
Njombe	3,195	12,083	5,747	3,195	12,083	5,747
Ludewa	356	594	228	356	594	228
Iringa Urban	53	78	77	53	78	77
Kilolo	17,126	38,165	27,059	17,126	38,165	27,059
Total	102,857	222,372	126,725	102,857	222,372	126,725

17.3 ANIMAL CONTRIBUTION TO CROPS: Number of Crop Growing Households Using Organic Fertilizer By District During 2002/03 Agriculture Year, Iringa Region

District	Did you apply organic fertilizer during 2002/03?				Total Number of Crop growing households
	Using Organic Fertilizer		Not Using Organic Fertilizer		
	Number	%	Number	%	
Iringa Rural	12,486.5	13	39,264.7	22	51,751
Mufindi	17,823.7	19	38,942.4	21	56,766
Makete	36,475.8	39	40,737.9	22	77,214
Njombe	6,488.8	7	17,854.8	10	24,344
Ludewa	10,655.6	11	14,202.2	8	24,858
Iringa Urban	233.3	0	929.1	1	1,162
Kilolo	9,707.7	10	29,456.9	16	39,165
Total	93,871.4	100	181,387.9	100	275,259

17.4 ANIMAL CONTRIBUTION TO CROPS: Area of Farm Yard Manure and Compost Application By District During 2002/03 Agriculture Year

District	Farm Yard Manure Area Applied		Compost Area Applied		Total Area applied with Organic fertiliser	
	Area (ha)	%	Area (%)	%	Area (%)	%
Iringa Rural	7,150	14	2,034	23	9,183	15
Mufindi	10,146	20	2,528	28	12,674	21
Makete	19,498	38	1,082	12	20,580	34
Njombe	2,631	5	1,009	11	3,640	6
Ludewa	4,984	10	509	6	5,493	9
Iringa Urban	191	0	34	0	224	0
Kilolo	6,315	12	1,787	20	8,102	14
Total	50,914	100	8,982	100	59,896	100

CATTLE PRODUCTION

18.3 Number of Households Rearing Cattle, Head of Cattle and Average Head per Household by Herd Size; on 1st October 2003

Herd Size	Number of Household	%	Number of Cattle	%	Average Number Per Household
1-5	27,263	51	81,555	19	3
6-10	14,510	27	113,118	27	8
11-15	5,867	11	74,337	18	13
16-20	2,460	5	43,972	10	18
21-30	2,605	5	64,398	15	25
31-40	938	2	33,750	8	36
41-50	112	0	5,156	1	46
61-100	74	0	4,666	1	63
Total	53,829	100	420,954	100	8

18.7 Number of Beef Cattle By Category and District as on 1st October, 2003

District	Category - Improved Beef Cattle						Total
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	
Iringa Rural
Mufindi
Makete
Njombe	304	487	304	.	61	121	1,277
Ludewa	.	62	.	62	.	.	124
Iringa Urban	66	66
Kilolo	96	.	.	.	96	.	192
Total	466	549	304	62	157	121	1,659

18.8 Total number of Cattle By Category and District as on 1st October, 2003

District	Total Cattle						Total
	Bulls	Cows	Steers	Heifers	Male Calves	Female Calves	
Iringa Rural	8,298	14,241	12,184	7,929	5,381	5,564	53,596
Mufindi	9,949	28,290	20,854	12,988	9,751	10,687	92,519
Makete	21,263	45,638	34,696	22,554	13,150	16,045	153,347
Njombe	4,650	14,927	3,573	7,659	3,514	4,596	38,918
Ludewa	3,966	12,334	599	4,149	3,823	3,500	28,371
Iringa Urban	199	476	119	199	265	199	1,456
Kilolo	7,303	16,818	13,281	4,348	5,264	5,733	52,746
Total	55,628	132,724	85,306	59,824	41,147	46,324	420,954

GOATS PRODUCTION

19.1 GOAT PRODUCTION: Total Number of Goats by Type and District as on 1st October, 2003

District	Indigenous			Improved for Meat			Improved Dairy			Total Goat	
	Number of Households	Number of Goat	%	Number of Households	Number of Goat	%	Number of Households	Number of Goat	%	Number of Households	Number of Goats
Iringa Rural	3,201	36,497	91	238	2,861	7	121	607	2	3,201	39,965
Mufindi	5,290	116,351	100	0	.	0	129	129	0	5,290	116,480
Makete	13,567	74,395	100	0	.	0	133	265	0	13,700	74,661
Njombe	7,574	30,397	99	121	121	0	119	119	0	7,574	30,637
Ludewa	7,817	36,035	90	62	248	1	248	3,881	10	7,878	40,165
Iringa Urban	53	1,548	97	0	.	0	13	53	3	53	1,601
Kilolo	3,408	21,249	89	192	192	1	870	2,526	11	3,890	23,967
Total	40,909	316,474	97	613	3,422	1	1,634	7,580	2	41,585	327,476

19.2 Number of Households Rearing Goats and Herds of Goats and Average Head per Household by Herd Size as on 1st October, 2003

Herd Size	Number of Household	%	Number of Goat	%	Average Number Per Household
1-4	22668	55	56932	17	3
5-9	12379	30	78274	24	6
10-14	3340	8	38195	12	11
15-19	1474	4	23441	7	16
20-24	681	2	14504	4	21
25-29	241	1	6265	2	26
30-39	133	0	4645	1	35
40+	669	2	105220	32	157
Total	41585	100	327476	100	8

19.3 Total Number of Goats by Category and Type of Goat as on 1st October, 2003

Category of Goats	Indigenous Goats		Improved Meat Goat		Improved Dairy Goat		Total Goat	
	Number	%	Number	%	Number	%	Number	%
Billy Goat	41,426.97	97.2	339.40	0.8	841.16	2.0	42,607.53	13.0
Castrated Goat	82,558.61	95.5	.	0.0	3,923.08	4.5	86,481.69	26.4
She Goat	128,762.26	96.8	2,986.66	2.2	1,265.30	1.0	133,014.21	40.6
Male Kid	32,176.69	98.3	96.11	0.3	459.11	1.4	32,731.91	10.0
She Kid	31,549.37	96.7	.	0.0	1,091.73	3.3	32,641.09	10.0
Total	316,473.89	96.6	3,422.17	1.0	7,580.38	2.3	327,476.44	100.0

19.4 Total Number of Indigenous Goat by Category and District as on 1st October, 2003

District	Type					
	Billy Goats	Castrated Goat	She Goat	Male Kid	She Kid	Total
Iringa Rural	6,265	1,547	19,854	5,088	3,744	36,497
Mufindi	7,818	77,688	17,936	6,177	6,733	116,351
Makete	14,339	796	39,430	10,463	9,367	74,395
Njombe	4,532	245	17,674	3,517	4,429	30,397
Ludewa	4,709	742	21,541	4,237	4,808	36,035
Iringa Urban	291	40	701	238	278	1,548
Kilolo	3,473	1,501	11,627	2,457	2,191	21,249
Total	41,427	82,559	128,762	32,177	31,549	316,474

19.5 Total Number of Indigenous Goat by Category and District as on 1st October, 2003

District	Number of Improved for Meat					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Iringa Rural	119	.	2,742	.	.	2,861
Mufindi
Makete
Njombe	.	.	121	.	.	121
Ludewa	124	.	124	.	.	248
Iringa Urban
Kilolo	96	.	.	96	.	192
Total	339	.	2,987	96	.	3,422

19.6 Total Number of Improved Dairy Goat by Category and District as on 1st October, 2003

District	Improved Dairy Goats					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Iringa Rural	607	607
Mufindi	.	.	129	.	.	129
Makete	133	.	133	.	.	265
Njombe	61	.	.	59	.	119
Ludewa	61	3,633	188	.	.	3,881
Iringa Urban	.	.	40	13	.	53
Kilolo	587	290	777	387	485	2,526
Total	841	3,923	1,265	459	1,092	7,580

19.7 Total Number of Total Goat by Category and District as on 1st October, 2003

District	Total Goat					
	Billy Goat	Castrated Goat	She Goat	Male Kid	She Kid	Total
Iringa Rural	6,384	1,547	22,595	5,088	4,351	39,965
Mufindi	7,818	77,688	18,064	6,177	6,733	116,480
Makete	14,472	796	39,562	10,463	9,367	74,661
Njombe	4,593	245	17,795	3,576	4,429	30,637
Ludewa	4,893	4,375	21,853	4,237	4,808	40,165
Iringa Urban	291	40	741	251	278	1,601
Kilolo	4,157	1,791	12,404	2,940	2,676	23,967
Total	42,608	86,482	133,014	32,732	32,641	327,476

19.8 Total Number of Goats by Type and District as on 1st October, 2003

District	Indigenous			Improved for Meat			Improved Dairy			Total Goat	
	Number of Households	Number of Goat	%	Number of Households	Number of Goat	%	Number of Households	Number of Goat	%	Number of Households	Number of Goat
Iringa Rural	3,201	36,497	91	238	2,861	7	121	607	2	3,201	39,965
Mufindi	5,290	116,351	100	0	.	0	129	129	0	5,290	116,480
Makete	13,567	74,395	100	0	.	0	133	265	0	13,700	74,661
Njombe	7,574	30,397	99	121	121	0	119	119	0	7,574	30,637
Ludewa	7,817	36,035	90	62	248	1	248	3,881	10	7,878	40,165
Iringa Urban	53	1,548	97	0	.	0	13	53	3	53	1,601
Kilolo	3,408	21,249	89	192	192	1	870	2,526	11	3,890	23,967
Total	40,909	316,474	97	613	3,422	1	1,634	7,580	2	41,585	327,476

SHEEP PRODUCTION

20.1 Total Number of Sheep by Type and District as on 1st October, 2003

Breed	Number of Indigenous		Number of Improved		Total Sheep	
	Number	%	Number	%	Number	%
Ram	10,350	96	398	4	10,748	16
Castrated Sheep	2,678	95	128	5	2,805	4
She Sheep	34,620	98	781	2	35,401	53
Male Lamb	7,355	98	126	2	7,481	11
She Lamb	10,131	92	858	8	10,989	16
Total	65,133	97	2,291	3	67,424	100

20.2 Number of Households Rearing or Managing Sheep by District as on 1st October, 2003.

District	Raising Sheep		Not Raising Sheep		Total	
	Number	%	Number	%	Number of Agricultural Households	Keeping Households
Iringa Rural	1,240	2	51,473	98	52,714	1,240
Mufindi	1,137	2	55,629	98	56,766	1,137
Makete	5,407	7	73,365	93	78,772	5,407
Njombe	848	3	23,679	97	24,527	848
Ludewa	1,992	8	23,235	92	25,227	1,992
Iringa Urban	26	2	1,136	98	1,162	26
Kilolo	1,065	3	38,484	97	39,549	1,065
Total	11,716	4	267,001	96	278,717	11,716

20.3 Number of Sheep by Type of Sheep and District as of 1st October, 2002/03

District	Number of Indigenous		Number of Improved for Mutton		Total Sheep	
	Number	%	Number	%	Number	%
Iringa Rural	15,377	96	600	4	15,976	24
Mufindi	5,915	98	128	2	6,043	9
Makete	29,092	97	927	3	30,018	45
Njombe	3,148	96	120	4	3,268	5
Ludewa	6,123	100		0	6,123	9
Iringa Urban	331	71	132	29	463	1
Kilolo	5,148	93	384	7	5,533	8
Total	65,133	97	2,291	3	67,424	100

20.4 SHEEP PRODUCTION: Number of Sheep by Type of Sheep and District as of 1st October, 2002/03

District	Indigenous Sheep	Improved for Mutton		Total Households raising sheep
		average sheep	Total Sheep	
Iringa Rural	15,377	600	15,976	1,240
Mufindi	5,915	128	6,043	1,137
Makete	29,092	927	30,018	5,407
Njombe	3,148	120	3,268	848
Ludewa	6,123		6,123	1,992
Iringa Urban	331	132	463	26
Kilolo	5,148	384	5,533	1,065
Total	65,133	2,291	67,424	11,716

20.5 Number of Households and Herds of Sheep by Herd Size as on 1st October, 2002/03

Herd Size	Number of Households	%	Number of Sheep	%	Average Number Per Household
1-4	6,429	55	15,749	23	2
5-9	3,596	31	23,568	35	7
10-14	829	7	9,976	15	12
15-19	423	4	6,823	10	16
20-24	116	1	2,316	3	20
25-29	133	1	3,318	5	25
30-39	13	0	423	1	32
40+	117	1	5,251	8	45
Total	11,655	100	67,424	100	6

20.6 Total Number of Indigenous Sheep by Type and District as of 1st October, 2002/03

District	Number of Indigenous					Total
	Rams	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Iringa Rural	2,227	1,576	8,522	822	2,229	15,377
Mufindi	1,375	128	2,900	626	886	5,915
Makete	4,097	521	15,330	4,240	4,903	29,092
Njombe	363	362	1,574	545	303	3,148
Ludewa	1,058	64	3,341	731	929	6,123
Iringa Urban	66	26	238	.	.	331
Kilolo	1,164	.	2,715	391	879	5,148
Total	10,350	2,678	34,620	7,355	10,131	65,133

20.7 Total Number of Improved Sheep by Type and District as of 1st October.

District	Number of Improved for Mutton					Total
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Iringa Rural	600	600
Mufindi	.	128	.	.	.	128
Makete	398	.	529	.	.	927
Njombe	.	.	60	60	.	120
Ludewa
Iringa Urban	.	.	.	66	66	132
Kilolo	.	.	192	.	192	384
Total	398	128	781	126	858	2291

20.8 Total Number of Sheep by Type of Sheep and District as of 1st October, 2002/03

District	Total Sheep					Total
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Iringa Rural	2,227	1,576	8,522	822	2,829	15,976
Mufindi	1,375	256	2,900	626	886	6,043
Makete	4,495	521	15,859	4,240	4,903	30,018
Njombe	363	362	1,634	605	303	3,268
Ludewa	1,058	64	3,341	731	929	6,123
Iringa Urban	66	26	238	66	66	463
Kilolo	1,164	.	2,907	391	1,071	5,533
Total	10,748	2,805	35,401	7,481	10,989	67,424

PIGS PRODUCTION

21.1 Number of Households and Pigs, by Herd Size as on 1st October, 2003

Herd Size	Number of Household	%	Number of Pig	%	Average Number Per Household
1-4	57,906	86	91,509	51	2
5-9	5,443	8	39,086	22	7
10-14	2,959	4	32,758	18	11
15-19	471	1	7,591	4	16
20-24	132	0	2,633	1	20
30-39	240	0	7,326	4	30
Total	67,150	100	180,904	100	3

21.2 Number of Households and Pigs by District during 2002/03.

District	Number of Household	Number of Pig	Average Number Per Household
Iringa Rural	7,080	17,284	2
Mufindi	17,585	64,530	4
Makete	17,503	44,381	3
Njombe	10,166	22,619	2
Ludewa	2,718	4,806	2
Iringa Urban	65	341	5
Kilolo	12,033	26,943	2
Total	67,150	180,904	3

21.3 Total Number of Pigs by Type and District as on 1st October, 2003

District	Pig Type					Total
	Boar	Castrated Male	Sow / Gilt	Male Piglet	She Piglet	
Iringa Rural	2,874	243	7,569	3,430	3,169	17,284
Mufindi	10,076	974	17,421	17,506	18,554	64,530
Makete	7,606	3,089	17,321	7,017	9,348	44,381
Njombe	3,325	2,059	9,251	3,940	4,043	22,619
Ludewa	612	189	2,411	672	922	4,806
Iringa Urban	64	25	77	62	112	341
Kilolo	6,161	880	10,699	4,370	4,834	26,943
Total	30,717	7,459	64,749	36,997	40,983	180,904

LIVESTOCK PEST & PARASITE CONTROL

22.1: PESTS AND PARASITE: Number of Livestock Rearing households that dewormed Livestock by Type and District during 2002/03 Agriculture Year.

District	Demworming Livestock		NOT Demworming Livestock		Total
	No. of Households	%	Not deworming Livestock.	%	
Iringa Rur	3,196	49	3,296	51	6,493
Mufindi	10,149	76	3,196	24	13,346
Njombe	16,478	59	11,472	41	27,950
Ludewa	3,994	49	4,183	51	8,177
Makete	3,812	49	4,003	51	7,815
Iringa Urb	65	83	13	17	78
Kilolo	5,050	66	2,628	34	7,677
Total	42,744	60	28,791	40	71,536

22.2 PESTS AND PARASITE: Number of Livestock Rearing households deworming Livestock by District during 2002/03 Agriculture Year.

District	Cattles		Goats		Sheep		Pigs	
	No. of Households	%	No. of Households	%	No. of Households	%	No. of Households	%
Iringa Rural	1,652	6	237	2	570	14	1,555	7
Mufindi	5,688	21	2,374	22	496	12	5,594	26
Njombe	10,568	40	4,359	40	1,701	42	7,552	35
Ludewa	2,484	9	1,089	10	481	12	2,781	13
Makete	2,449	9	2,258	20	371	9	869	4
Iringa Urban	13	0	26	0	13	0	25	0
Kilolo	3,689	14	691	6	385	10	3,010	14
Total	26,543	100	11,033	100	4,017	100	21,386	100

22.5 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households reporting to have encountered tsetse flies problems during 2002/03 Agriculture Year by District, 2002/03 Agricultural Year

District	Tsetse Flies Problems		NO Tsetse Flies Problems		Total
	Number	%	Number	%	
Iringa Rural	1,292	19	5,438	81	6,730
Mufindi	2,175	16	11,667	84	13,842
Njombe	3,715	13	24,118	87	27,833
Ludewa	1,213	15	6,844	85	8,057
Makete	634	8	7,118	92	7,752
Iringa Urban	26	40	39	60	65
Kilolo	1,952	25	5,822	75	7,774
Total	11,008	15	61,045	85	72,053

22.6 LIVESTOCK PESTS AND PARASITE CONTROL: Number and Percent of agricultural households by Method of Tsetse flies Control use during 2002/03 Agriculture Year and District, 2002/03 Agricultural Year

District	Method of Tsetse Flies Control								
	None		Spray		Dipping		Trapping		Total
	Number	% age	Number	% age	Number	% age	Number	% age	
Iringa Rural	354	27	698	54	240	19	0	0	1,292
Mufindi	1,790	82	385	18	0	0	0	0	2,175
Njombe	2,521	68	1,194	32	0	0	0	0	3,715
Ludewa	849	70	120	10	182	15	61	5	1,213
Makete	571	90	0	0	64	10	0	0	634
Iringa Urban	0	0	26	100	0	0	0	0	26
Kilolo	582	30	1,177	60	193	10	0	0	1,952
Total	6,667	61	3,601	33	679	6	61	1	11,008

OTHER LIVESTOCK

23a OTHER LIVESTOCK: Total Number of Other Livestock by Type and District as of 1st October 2003

Type	Chicken		Others	
	Number	%	Type	Number
Indigenous Chicken	2,045,274	91	Ducks	82,093
Layer	82,311	4	Turkeys	1,620
Broiler	114,098	5	Rabbits	59,533
		0	Donkeys	3,494
Total	2,241,683	100		146,740

23b OTHER LIVESTOCK: Number of households with chicken and Category of Chicken by District

District	Number of Chicken			Total Number of chicken
	Indigenous Chicken	Layer	Broiler	
Mufindi	503,440	8,328	113,059	624,826
Njombe	576,680	664	0	577,343
Iringa Rural	393,676	7,220	121	401,017
Ludewa	203,931	64,841	918	269,689
Kilolo	240,877	0	0	240,877
Makete	118,002	1,259	0	119,261
Iringa Urban	8,668	0	0	8,668
Total	2,045,274	82,311	114,098	2,241,683

23c OTHER LIVESTOCK: Number of Households Rearing and number of Other Livestock by Type and District

District	Type of Livestock				
	Ducks	Turkeys	Rabbits	Donkeys	Other
Iringa Rural	15,620	235	10,178	1,092	.
Mufindi	5,970	714	23,622	255	53,367
Njombe	4,163	.	13,280	239	64,142
Ludewa	51,469	61	7,962	.	.
Makete	.	.	1,389	1,908	33,885
Iringa Urban	489	.	128	.	.
Kilolo	4,383	610	2,974	.	4,138
Total	82,093	1,620	59,533	3,494	155,532

23d OTHER LIVESTOCK: Total Number of households and chicken raised by flock size as of 1 st October 2003.

Flock Size	Number of Households	%	Number of Chicken	Average Chicken per Households
1-4	49,897	25	136,130	6
5-9	65,178	33	420,914	19
19-Oct	58,979	29	752,508	34
20-29	17,014	9	379,348	17
30-39	5,191	3	164,368	7
40-49	1,540	1	62,731	3
50-99	2,066	1	138,068	6
100+	253	0	187,616	8
Total	200,117	100	2,241,683	100

23d: OTHER LIVESTOCK: Total Number of households and chicken raised by flock size as of 1 st October 2003.

Flock Size	Chicken rearing households		Number of chicken	Average chicken per household
	Number	%		
1 - 4	49,897	25	136,130	3
5 - 9	65,178	33	420,914	6
10 - 19	58,979	29	752,508	13
20 - 29	17,014	9	379,348	22
30 - 39	5,191	3	164,368	32
40 - 49	1,540	1	62,731	41
50 - 99	2,066	1	138,068	67
100+	253	0	187,616	742
Total	200,117	100	2,241,683	11

FISH FARMING

28.1 FISH FARMING: Number of Agricultural Households involved in Fish Farming and District, 2002/03 Agricultural Year

District	Was fish farming carried out by this household during 2002/03?				
	Yes	%	NO	%	Number
Iringa Rural	0	0.0	52,714	100.0	52,714
Mufindi	1,285	2.3	55,481	97.7	56,766
Njombe	258	0.3	78,514	99.7	78,772
Ludewa	603	2.5	23,924	97.5	24,527
Makete	186	0.7	25,041	99.3	25,227
Iringa Urban	0	0.0	1,162	100.0	1,162
Kilolo	961	2.4	38,588	97.6	39,549
Total	3,293	1.2	275,424	98.8	278,717

28.2a FISH FARMING: Number of Agricultural Households By System of Farming and District, 2002/03 Agricultural Year

District	System of Fish Farming				
	Natural Pond	Dug out Pond	Natural Lake	Water Reservoir	Total
Mufindi	129	1,414			1,542
Njombe	0	382			382
Ludewa	0	844			844
Makete	0	186			186
Kilolo	96	1,057			1,153
Total	225	3,884			4,108

28.2b FISH FARMING: Number of Agricultural Households By Source of Fingerings and District, 2002/03 Agricultural Year

District	Source of Fingerling					Total
	Government Institution	NGOs / Project	Neighbour	Private Trader	Other	
Mufindi	386	772	257	127	0	1,542
Njombe	0	0	382	0	0	382
Ludewa	183	421	182	0	58	844
Makete	60	126	0	0	0	186
Kilolo	0	673	384	96	0	1,153
Total	629	1,992	1,206	223	58	4,108

28.2c FISH FARMING: Number of Agricultural Households By Location of Selling Fish and District, 2002/03 Agricultural Year

District	Where sold					
	Neighbor	Local market	Large scale farmers	Trade at farm	Did not Sell	Other
Mufindi	129	0	0	0	1156	0
Njombe	250	0	0	0	133	0
Ludewa	0	0	0	0	723	0
Makete	0	0	0	0	62	0
Kilolo	192	0	0	0	769	96
Total	570	0	0	0	2843	96

28.3 FISH FARMING: Total Number of Fish Harvested by Type and District, 2002/03 Agricultural Year

District	Number of Tilapia	Number of Carp	Number of Others
Mufindi	169,345	0	25,477
Njombe	12,685	0	0
Ludewa	20,300	299	6,966
Makete	7,969	0	0
Kilolo	39,215	0	0
Total	249,513	299	32,443

LIVESTOCK EXTENSION

29.1a LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice By District during the 2002/03 Agricultural Year

District	Received Livestock Advice		Did NOT Receive Livestock Advice		Total	Total number of households raising livestock	%
	No. of households	%	No. of households	%			
Iringa Rural	14,529	28	38,185	72	52,714	6,730	13
Mufindi	7,699	14	49,067	86	56,766	13,842	24
Njombe	39,985	51	38,786	49	78,772	28,215	36
Ludewa	6,713	27	17,814	73	24,527	8,299	34
Makete	7,318	29	17,908	71	25,227	7,877	31
Iringa Urban	51	4	1,111	96	1,162	78	7
Kilolo	15,784	40	23,765	60	39,549	7,774	20
Total	92,080	33	186,636	67	278,717	72,814	26

29.1b LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Feeds and Proper Feeding By Source and District, 2002/03 Agricultural Year

District	Source of Extension Advice					
	Government	NGO / Development Project	Co-operative	Large Scale Farmer	Other(former coding)	Other
Iringa Rural	4,812	121	0	0	0	0
Mufindi	4,316	0	0	0	0	0
Njombe	21,733	531	0	263	0	0
Ludewa	1,033	299	0	0	0	0
Makete	2,832	0	0	0	0	0
Iringa Urban	12	0	0	0	0	0
Kilolo	9,581	1,442	0	0	0	0
Total	44,318	2,393	0	263	0	0

29.1c LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Proper Milking By Source and District, 2002/03 Agricultural Year

District	Source of Advice Proper Milking						Total number of households raising livestock	% of receiving advice out of total
	Government	NGO / Development Project	Co-operative	Large Scale Farmer	Other	Total		
Iringa Rural	1,324	120	0	0	0	1,444	6,730	3
Mufindi	1,132	119	0	0	0	1,251	13,842	2
Njombe	6,149	133	0	132	0	6,413	28,215	8
Ludewa	242	177	0	0	0	418	8,299	2
Makete	745	63	0	0	0	808	7,877	3
Iringa Urban	0	0	0	0	0	0	0	0
Kilolo	2,318	291	0	0	0	2,609	7,774	7
Total	11,910	902	0	132	0	12,944	72,814	5
%	92	7	0	1	0	100		

29.1f LIVESTOCK EXTENSION: Number of Households Receiving Advice on Milk Hygiene By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Milk Hygiene						Total number of households raising livestock	% of receiving advice out of total
	Government	NGO / Development Project	Co-operative	Large Scale Farmer	Other	Total		
Iringa Rural	1,683	0		0		1,683	6,730	3
Mufindi	1,389	0		0		1,389	13,842	2
Njombe	5,891	260		132		6,283	28,215	8
Ludewa	297	60		0		357	8,299	1
Makete	688	63		0		751	7,877	3
Iringa Urban	0	0	0	0	0	0	0	0
Kilolo	2,609	291		0		2,900	7,774	7
Total	12,557	673		132		13,362	72,814	5
%	94	5	0	1	0	100		

29.1g LIVESTOCK EXTENSION: Number of Households Receiving Advice on Disease Control By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Disease Control (dipping/spraying)						Total number of households raising livestock	% of receiving advice out of total
	Government	NGO / Development Project	Co-operative	Large Scale Farmer	Other	Total		
Iringa Rural	3,292	0	0	118	0	3,410	6,730	6
Mufindi	5,466	0	0	0	0	5,466	13,842	10
Njombe	19,808	661	0	132	133	20,734	28,215	26
Ludewa	2,906	180	0	122	0	3,209	8,299	13
Makete	4,897	0	0	0	0	4,959	7,877	20
Iringa Urban	12	0	0	0	0	12	0	1
Kilolo	8,814	97	0	97	0	9,008	7,774	23
Total	45,197	938	0	469	133	46,798	72,814	17
%	96.6	2.0	0.0	1.0	0.3	100.0		

29.6 LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Extension Advice on Herd /Flock Size and Selection By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Herd/Flock Size & Selection						Total number of households raising livestock	% of receiving advice out of total
	Government	NGO / Development Project	Co-operative	Large Scale Farmer	Other	Total		
Iringa Rural	1,184	120	0	0	0	1,304	6,730	2
Mufindi	1,016	127	0	119	0	1,262	13,842	2
Njombe	5,488	132	0	0	0	5,620	28,215	7
Ludewa	535	180	0	0	0	715	8,299	3
Makete	624	0	0	0	0	624	7,877	2
Iringa Urban	0		0	0	0	0	0	0
Kilolo	1,844	194	0	0	0	2,038	7,774	5
Total	10,690	753	0	119	0	11,562	72,814	4
%	92.5	6.5	0.0	1.0	0.0	100.0		

29.1i LIVESTOCK EXTENSION: Number of Agricultural Households Receiving Advice Pasture Establishment By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Pasture Establishment						Total number of households raising livestock	% of receiving advice out of total
	Government	NGO / Development Project	Co-operative	Large Scale Farmer	Other	Total		
Iringa Rural	2,046	0	0	0	0	2,046	6,730	4
Mufindi	1,256	0	0	0	0	1,256	13,842	2
Njombe	7,726	397	0	132	0	8,255	28,215	10
Ludewa	182	239	0	0	0	421	8,299	2
Makete	434	0	0	0	0	434	7,877	2
Iringa Urban	0	0	0	0	0	0	0	0
Kilolo	2,898	98	0	0	0	2,996	7,774	8
Total	14,542	734	0	132	0	15,408	72,814	6
%	94	5	0	1	0	100		

29.1j LIVESTOCK EXTENSION: Number of Households Receiving Advice Group Formation By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Group Formation						Total number of households raising livestock	% of receiving advice out of total
	Government	NGO / Development Project	Co-operative	Large Scale Farmer	Other	Total		
Iringa Rural	1,923	120	0	0	0	2,043	6,730	4
Mufindi	2,420	0	0	0	0	2,420	13,842	4
Njombe	5,670	3,311	0	132	0	9,113	28,215	12
Ludewa	182	299	0	0	0	481	8,299	2
Makete	943	0	0	0	0	943	7,877	4
Iringa Urban	0	0	0	0	0	0	0	0
Kilolo	4,159	295	96	0	0	4,551	7,774	12
Total	15,297	4,026	96	132	0	19,551	72,814	7
%	78.2	20.6	0.5	0.7	0.0	100.0		

29.1k LIVESTOCK EXTENSION: Number of Households Receiving Advice on Calf rearing By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Calf rearing						Total number of households raising livestock	% of receiving advice out of total
	Government	NGO / Development Project	Co-operative	Large Scale Farmer	Other	Total		
Iringa Rural	2,097	120			0	2,217	6,730	4
Mufindi	2,401	0			0	2,401	13,842	4
Njombe	7,719	265			127	8,111	28,215	10
Ludewa	483	118			0	601	8,299	2
Makete	749	63			0	812	7,877	3
Iringa Urban	0	0			0	0	0	0
Kilolo	3,099	97			0	3,196	7,774	8
Total	16,548	664			127	17,339	72,814	6
%	95	4	0	0	1	100		

29.11 LIVESTOCK EXTENSION: Number of Households Receiving Advice on Use of Improved Bulls By Source and District, 2002/03 Agricultural Year

District	Source of Advice on Use of Improved Bulls						Total number of households raising livestock	% of receiving advice out of total
	Government	NGO / Development Project	Co-operative	Large Scale Farmer	Other	Total		
Iringa Rural	2224	360	0	0	0	2583	6,730	5
Mufindi	3671	122	0	0	0	3793	13,842	7
Njombe	7682	133	0	0	0	7814	28,215	10
Ludewa	362	178	0	0	0	540	8,299	2
Makete	926	63	0	0	0	989	7,877	4
Iringa Urban	26	0	0	0	0	26	0	2
Kilolo	3105	192	0	97	0	3394	7,774	9
Total	17996	1048	0	97	0	19140	72,814	7
%	94	5	0	1	0	100		

29.11 LIVESTOCK EXTENSION: Number of Agricultural Households By Quality of Extension Services and District, 2002/03 Agricultural Year

District	Quality of Service										Total
	Very Good		Good		Average		Poor		No Good		
	Number	%	Number	%	Number	%	Number	%	Number	%	
Iringa Rural	3,823	24	10,780	67	1,188	7	120	1	237	1	16,148
Mufindi	2,326	27	5,864	67	129	1	386	4	0	0	8,705
Njombe	6,256	15	33,046	82	1,059	3	0	0	131	0	40,492
Ludewa	1,640	27	4,048	68	244	4	0	0	61	1	5,992
Makete	1,537	21	5,331	72	433	6	63	1	0	0	7,363
Iringa Urban	12	20	38	60	13	21	0	0	0	0	64
Kilolo	6,333	33	10,730	56	2,021	10	192	1	0	0	19,276
Total	21,927	22	69,837	71	5,087	5	761	1	428	0	98,041

29.1 LIVESTOCK EXTENSION: Number of Households Receiving Advice on Other Extension Messages by Source

District	Other Livestock Extension Provider							Total number of households raising livestock	%
	Government	NGO / Development Project	Co-operative	Large Scale Farmer	Other (former coding)	Other	Total		
Iringa Rural	14,529	14,409	14,409	14,409		14,409	72,163	6,730	9
Mufindi	7,699	7,699	7,699	7,699		7,699	38,497	13,842	36
Njombe	39,985	39,323	39,323	39,456		39,323	197,411	28,215	14
Ludewa	6,652	6,652	6,652	6,713		6,652	33,319	8,299	25
Makete	7,318	7,192	7,192	7,192		7,192	36,087	7,877	22
Iringa Urban	51	51	51	51		51	257	0	0
Kilolo	16,073	15,486	15,102	15,294		15,102	77,057	7,774	10
Total	92,307	90,813	90,428	90,814		90,428	454,791	72,814	16
%	20	20	20	20	0	20	100		

ACCESS TO INFRASTRUCTURE & OTHER SERVICES

30.1a Mean distance from holder's dwellings to Secondary school by district

District	Distance to Secondary School											Total	Mean
	Less than 1		1 - 2.9		3 - 9.9		10 - 19.9		Above 20				
	No. of households	%	No. of households	%	No. of households	%	No. of households	%	No. of households	%			
Iringa Rural	2,217	4.2	3,786	7.2	15,787	29.9	12,893	24.5	18,030	34.2	52,714	17.7	
Mufindi	247	0.4	3,521	6.2	15,002	26.4	16,909	29.8	21,087	37.1	56,766	19.2	
Njombe	1,661	2.1	8,311	10.6	22,636	28.7	32,694	41.5	13,470	17.1	78,772	12.6	
Ludewa	482	2.0	1,260	5.1	8,358	34.1	3,018	12.3	11,409	46.5	24,527	20.4	
Makete	190	0.8	1,094	4.3	7,272	28.8	11,300	44.8	5,371	21.3	25,227	17.8	
Iringa Urban	53	4.6	275	23.7	597	51.3	237	20.4	0	0.0	1,162	6.4	
Kilolo	678	1.7	1,773	4.5	7,748	19.6	9,142	23.1	20,208	51.1	39,549	20.3	
Total	5,527	2.0	20,021	7.2	77,399	27.8	86,193	30.9	89,575	32.1	278,717	17.1	

30.1b Mean distance from holder's dwellings to All Weather Roads by district

District	Distance to All Weather Roads											Total	Mean
	Less than 1		1 - 2.9		3 - 9.9		10 - 19.9		Above 20				
	No. of households	%	No. of households	%	No. of households	%	No. of households	%	No. of households	%			
Iringa Rural	30,512	57.9	9,375	17.8	7,864	14.9	2,277	4.3	2,686	5.1	52,714	4.59	
Mufindi	25,336	44.6	12,317	21.7	8,735	15.4	4,349	7.7	6,029	10.6	56,766	6.47	
Njombe	43,345	55.0	19,702	25.0	12,163	15.4	1,061	1.3	2,500	3.2	78,772	2.92	
Ludewa	5,798	23.6	5,563	22.7	7,634	31.1	4,561	18.6	971	4.0	24,527	6.06	
Makete	12,855	51.0	3,877	15.4	4,336	17.2	3,780	15.0	378	1.5	25,227	4.79	
Iringa Urban	170	14.6	53	4.6	927	79.7	0	0.0	13	1.1	1,162	7.72	
Kilolo	21,309	53.9	7,062	17.9	4,042	10.2	1,843	4.7	5,293	13.4	39,549	8.09	
Total	139,325	50.0	57,949	20.8	45,702	16.4	17,870	6.4	17,870	6.4	278,717	5.16	

33.01a: Mean Distances from Horders Dwellings to Infrastructures and Services by District

District	Mean Distance to										
	Secondary Schools	Primary Schools	All weather roads	Feeder Roads	Hospitals	Health Clinics	Regional Capital	Primary Markets	Secondary Market	Tertiary Market	Tarmac Roads
Iringa Rural	17.7	2.8	4.6	1.2	44.5	8.9	48.9	12.5	14.35	44.3	33.6
Mufindi	19.2	3.4	6.5	1	54.6	7.7	124.1	10.9	21.01	49.4	42.2
Njombe	12.6	3.2	2.9	1.2	42	8.3	236.4	17	35.67	36.3	25.6
Ludewa	20.4	1.9	6.1	3.1	30.9	5.1	349.6	28.7	58.56	61.9	116.4
Makete	17.8	1.8	4.8	2.5	25.4	7	314.3	17.5	35.26	39.4	78
Iringa Urban	6.4	1.4	7.7	1.7	11.1	5.8	13.7	13.8	24.32	8.1	14.1
Kilolo	20.3	2.6	8.1	3.2	63.3	9.9	65.2	16.4	12.11	89.5	41.4
Total	17.1	2.8	5.2	1.7	45.4	8.1	169.8	15.9	27.24	50.4	45.4

33.01e: Number of Households by Distance to Hospital for 2002/03 Agricultural Year

District	Distance to Hospital										Total	Mean
	Less than 1		1 - 2.9		3 - 9.9		10 - 19.9		Above 20			
	No. of households	%	No. of households	%	No. of households	%	No. of households	%	No. of households	%		
Iringa Rural	603	1.1	239	0.5	6,627	12.6	7,139	13.5	38,105	72.3	52,714	44.5
Mufindi	0	0.0	122	0.2	4,073	7.2	4,347	7.7	48,224	85.0	56,766	54.6
Njombe	0	0.0	528	0.7	7,133	9.1	9,272	11.8	61,839	78.5	78,772	42.0
Ludewa	183	0.7	428	1.7	4,530	18.5	3,678	15.0	15,707	64.0	24,527	30.9
Makete	186	0.7	1,130	4.5	3,831	15.2	6,384	25.3	13,695	54.3	25,227	25.4
Iringa Urban	0	0.0	0	0.0	913	78.5	199	17.1	51	4.4	1,162	11.1
Kilolo	0	0.0	0	0.0	1,470	3.7	1,727	4.4	36,352	91.9	39,549	63.3
Total	972	0.3	2,447	0.9	28,578	10.3	32,746	11.7	213,974	76.8	278,717	45.4

33.01f: Number of Households by Distance to Health Clinic and District, 2002/03 Agricultural Year

District	Distance to Health Clinic										Total	Mean
	Less than 1		1 - 2.9		3 - 9.9		10 - 19.9		Above 20			
	No. of households	%	No. of households	%	No. of households	%	No. of households	%	No. of households	%		
Iringa Rural	4,377	8.3	12,123	23.0	23,195	44.0	8,318	15.8	4,700	8.9	52,714	8.9
Mufindi	4,947	8.7	9,463	16.7	24,061	42.4	13,670	24.1	4,625	8.1	56,766	7.7
Njombe	5,096	6.5	14,158	18.0	36,600	46.5	16,161	20.5	6,756	8.6	78,772	8.3
Ludewa	4,055	16.5	10,356	42.2	8,605	35.1	425	1.7	1,087	4.4	24,527	5.1
Makete	5,696	22.6	4,854	19.2	9,548	37.9	4,564	18.1	564	2.2	25,227	7.0
Iringa Urban	65	5.5	182	15.6	718	61.8	199	17.1	0	0.0	1,162	5.8
Kilolo	6,375	16.1	7,598	19.2	12,238	30.9	7,737	19.6	5,601	14.2	39,549	9.9
Total	30,611	11.0	58,734	21.1	114,966	41.2	51,073	18.3	23,333	8.4	278,717	8.1

33.01g: Number of Households by Distance to Primary School and District, 2002/03 Agricultural Year

District	Distance to Primary School										Total
	Less than 1km		1 - 2.9 km		3 - 9.9 km		10 - 19.9		Above 20 km		
	No. of households	%	No. of households	%	No. of households	%	No. of households	%	No. of households	%	
Iringa Rural	7,664	14.5	26,261	49.8	17,105	32.4	1,329	2.5	355	0.7	52,714
Mufindi	13,790	24.3	25,853	45.5	16,355	28.8	640	1.1	127	0.2	56,766
Njombe	17,726	22.5	39,072	49.6	21,180	26.9	662	0.8	133	0.2	78,772
Ludewa	6,595	26.9	12,850	52.4	4,959	20.2	61	0.2	61	0.2	24,527
Makete	8,513	33.7	11,685	46.3	4,461	17.7	568	2.3	0	0.0	25,227
Iringa Urban	237	20.3	794	68.3	132	11.4	0	0.0	0	0.0	1,162
Kilolo	9,839	24.9	19,078	48.2	9,379	23.7	770	1.9	482	1.2	39,549
Total	64,364	23.1	135,593	48.6	73,571	26.4	4,031	1.4	1,158	0.4	278,717

Regional Capital	Tertiary Market	Hospitals	Tarmac Roads	Secondary Market	Primary Market	Health Clinics	All Weather Roads	Feeder Roads
169.84	50.45	45.43	45.42	27.24	15.89	8.12	5.16	1.73

33.7 ACCESS TO SERVICES: Number of Agricultural Households by Distance to Feeder Road and District, 2002/03 Agricultural Year

District	Distance to Feeder Roads										Total	Mean
	Less than 1		1 - 2.9		3 - 9.9		10 - 19.9		Above 20			
	No. of households	%	No. of households	%	No. of households	%	No. of households	%	No. of households	%		
Iringa Rural	37,948	72.0	11,544	21.9	2,868	5.4	0	0.0	353	0.7	52,714	1.2
Mufindi	40,150	70.7	11,916	21.0	4,450	7.8	127	0.2	124	0.2	56,766	1.0
Njombe	59,832	76.0	14,447	18.3	4,228	5.4	0	0.0	265	0.3	78,772	1.2
Ludewa	15,484	63.1	5,754	23.5	2,437	9.9	610	2.5	243	1.0	24,527	3.1
Makete	16,850	66.8	7,139	28.3	876	3.5	115	0.5	247	1.0	25,227	2.5
Iringa Urban	157	13.5	1,006	86.5	0	0.0	0	0.0	0	0.0	1,162	1.7
Kilolo	28,592	72.3	7,142	18.1	3,328	8.4	199	0.5	288	0.7	39,549	3.2
Total	199,012	71.4	58,948	21.1	18,186	6.5	1,050	0.4	1,520	0.5	278,717	1.7

33.01h: Number of Households by Distance to Feeder Road and District, 2002/03 Agricultural Year

District	Less than 1	1 - 2.9	3 - 9.9	10 - 19.9	Above 20	Total	Mean Distance
	No. of households	No. of households	No. of households	No. of households	No. of households		
Iringa Rural	37,948	11,544	2,868	0	353	52,714	1.2
Mufindi	40,150	11,916	4,450	127	124	56,766	1.0
Njombe	59,832	14,447	4,228	0	265	78,772	1.2
Ludewa	15,484	5,754	2,437	610	243	24,527	3.1
Makete	16,850	7,139	876	115	247	25,227	2.5
Iringa Urban	157	1,006	0	0	0	1,162	1.7
Kilolo	28,592	7,142	3,328	199	288	39,549	3.2
Total	199,012	58,948	18,186	1,050	1,520	278,717	1.7

33.01i: Number of Households by Distance to Regional Capital and District, 2002/03 Agricultural Year

District	Less than 1km	1 - 2.9 km	3 - 9.9 km	10 - 19.9 km	Above 20 km	Total	Mean Distance
Iringa Rur	241	121	2,780	9,794	39,777	52,714	49
Mufindi	0	0	740	0	56,027	56,766	124
Njombe	131	0	263	0	78,378	78,772	236
Ludewa	245	61	0	0	24,221	24,527	350
Makete	252	0	0	64	24,911	25,227	314
Iringa Urb	0	0	925	199	39	1,162	14
Kilolo	96	0	396	1,414	37,643	39,549	65
Total	965	183	5,104	11,471	260,995	278,717	170

33.1.i Number of Households by Distance to Tarmac Road and District, 2002/03 Agricultural Year

District	Less than 1 km	1 - 2.9 km	3 - 9.9 km	10 - 19.9 km	Above 20 km	Total	Mean Distance
Iringa Rur	5,653	2,023	6,713	8,818	29,506	52,714	33.6
Mufindi	1,404	1,156	5,761	7,541	40,904	56,766	42.2
Njombe	4,627	4,301	17,172	13,889	38,783	78,772	25.6
Ludewa	0	60	428	243	23,796	24,527	116.4
Makete	1,353	0	704	576	22,593	25,227	78.0
Iringa Urb	13	129	661	146	214	1,162	14.1
Kilolo	4,342	1,702	2,961	5,338	25,206	39,549	41.4
Total	17,393	9,370	34,400	36,551	181,002	278,717	45.4

33.01m: Number of Households by Distance to Primary Market and District, 2002/03 Agricultural Year

District	Less than 1 km	1 - 2.9 km	3 - 9.9 km	10 - 19.9 km	Above 20 km	Total	Mean Distance
Iringa Rur	6,652	6,879	17,848	11,767	9,567	52,714	12.5
Mufindi	9,622	6,453	22,057	6,361	12,273	56,766	10.9
Njombe	10,374	7,631	20,913	22,460	17,393	78,772	17.0
Ludewa	3,257	0	840	16,918	3,511	24,527	28.7
Makete	3,346	628	4,721	8,361	8,171	25,227	17.5
Iringa Urb	12	0	286	864	0	1,162	13.8
Kilolo	9,473	2,811	8,046	8,798	10,421	39,549	16.4
Total	42,737	24,403	74,712	75,529	61,336	278,717	15.9

33.01n: f Agricultural Households by Distance to Tertiary Market and District, 2002/03 Agricultural Year

District	Less than 1 km	1 - 2.9 km	3 - 9.9 km	10 - 19.9 km	Above 20 km	Total	Mean Distance
Iringa Rur	1,070.0	468.3	5,412.4	10,033.2	35,729.8	52,713.5	44.3
Mufindi	245.5	126.8	8,056.7	5,242.7	43,094.4	56,766.1	49.4
Njombe	522.2	132.7	6,671.6	14,352.2	57,093.1	78,771.8	36.3
Ludewa	359.5	305.9	2,601.4	540.3	20,719.9	24,526.9	61.9
Makete	2,708.9	0.0	1,656.3	3,101.5	17,760.1	25,226.8	39.4
Iringa Urb	0.0	12.5	925.7	198.5	25.7	1,162.4	8.1
Kilolo	0.0	0.0	194.3	1,415.2	37,939.6	39,549.1	89.5
Total	4,906.1	1,046.1	25,518.3	34,883.6	212,362.6	278,716.7	50.4

33.01o Number of Households by Distance to Secondary Market and District, 2002/03 Agricultural Year

District	Less than 1km	1 - 2.9 km	3 - 9.9 km	10 - 19.9 km	Above 20 km	Total	Mean Distance
Iringa Rur	3,357.6	9,223.1	14,521.4	10,579.5	15,031.8	52,713.5	14.4
Mufindi	7,017.8	2,434.6	14,528.7	11,688.6	21,096.3	56,766.1	21.0
Njombe	6,316.2	3,973.1	16,635.7	15,381.5	36,465.4	78,771.8	35.7
Ludewa	2,472.9	241.0	1,626.6	176.0	20,010.5	24,526.9	58.6
Makete	5,076.3	0.0	2,015.3	1,657.3	16,478.0	25,226.8	35.3
Iringa Urb	65.4	13.2	162.4	0.0	921.4	1,162.4	24.3
Kilolo	8,114.1	3,485.0	9,625.8	8,895.3	9,428.9	39,549.1	12.1
Total	32,420.3	19,370.1	59,115.9	48,378.1	119,432.3	278,716.7	27.2

33.19a TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Veterinary Clinic and District, 2002/03 Agricultural Year

District	Satisfaction of Using Veterinary Clinic										Total Number of households
	Very Good	%	Good	%	Average	%	Poor	%	No good	%	
	No. of households		No. of households		No. of households		No. of households		No. of households		
Iringa Rural	3,842	7.5	29,834	58.2	8,616	16.8	1,555	3.0	1,085	2.1	51,283
Mufindi	996	1.8	7,924	14.2	13,844	24.8	13,161	23.5	9,579	17.1	55,887
Njombe	9,380	11.9	30,106	38.3	2,497	3.2	927	1.2	250	0.3	78,507
Ludewa	956	3.9	7,788	31.8	4,374	17.8	1,158	4.7	122	0.5	24,527
Makete	1,186	4.7	3,373	13.4	693	2.8	2,726	10.8	190	0.8	25,163
Iringa Urban	38	3.8	157	15.6	115	11.4	26	2.6	0	0.0	1,007
Kilolo	4,739	12.0	10,297	26.0	4,743	12.0	994	2.5	481	1.2	39,549
Total	21,138	7.7	89,479	32.4	34,882	12.6	20,547	7.4	11,705	4.2	275,923

33.19b: Number of Agricultural Households by Satisfaction of Using Extension Center and District, 2002/03 Agricultural Year

District	Satisfaction of Using Extension Centre										Total Number of households
	Very Good	%	Good	%	Average	%	Poor	%	No good	%	
	No. of households		No. of households		No. of households		No. of households		No. of households		
Iringa Rural	1,920	11.7	10,161	62.0	3,475	21.2	718	4.4	118	0.7	16,392
Mufindi	0	0.0	4,251	36.0	3,843	32.6	2,174	18.4	1,535	13.0	11,802
Njombe	5,999	22.7	18,949	71.8	1,443	5.5	0	0.0	0	0.0	26,391
Ludewa	419	6.8	3,646	59.5	2,007	32.7	0	0.0	61	1.0	6,133
Makete	1,122	24.0	2,937	62.7	309	6.6	187	4.0	126	2.7	4,681
Iringa Urban	13	9.1	52	36.9	64	45.2	12	8.8	0	0.0	141
Kilolo	3,950	23.2	9,139	53.6	3,660	21.5	301	1.8	0	0.0	17,049
Total	13,423	16.3	49,135	59.5	14,801	17.9	3,392	4.1	1,839	2.2	82,590

33.19c TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Research Station and District, 2002/03 Agricultural Year

District	Satisfaction of Using Research Station										Total Number of households
	Very Good	%	Good	%	Average	%	Poor	%	No good	%	
	No. of households		No. of households		No. of households		No. of households		No. of households		
Iringa Rural	241	4.6	3,882	74.1	761	14.5	237	4.5	121	2.3	5,241
Mufindi	0	0.0	752	12.8	1,286	21.9	2,298	39.1	1,535	26.1	5,871
Njombe	127	8.8	1,052	72.9	264	18.3	0	0.0	0	0.0	1,443
Ludewa	0	0.0	733	100.0	0	0.0	0	0.0	0	0.0	733
Makete	0	0.0	126	33.3	64	16.9	189	49.7	0	0.0	379
Iringa Urban	12	100.0	0	0.0	0	0.0	0	0.0	0	0.0	12
Kilolo	0	0.0	0	0.0	98	50.6	96	49.4	0	0.0	195
Total	380	2.7	6,545	47.2	2,474	17.8	2,819	20.3	1,656	11.9	13,874

33.19d TYPE OF SERVICE: Number of Households by Satisfaction of Using Plant Protection Lab and District, 2002/03

District	Satisfaction of Plant Protection Lab.										
	Very Good	%	Good	%	Average	%	Poor	%	No good	%	Total Number of households
	No.of households		No.of households		No.of households		No.of households		No.of households		
Iringa Rural	240	5.5	3,387	77.8	485	11.2	120	2.8	121	2.8	4,353
Mufindi	498	11.2	0	0.0	0	0.0	2,431	54.5	1,530	34.3	4,459
Njombe	395	37.5	395	37.5	131	12.4	133	12.6	0	0.0	1,054
Ludewa	120	49.8	0	0.0	121	50.2	0	0.0	0	0.0	240
Makete	0	0.0	0	0.0	64	25.2	127	49.7	64	25.2	255
Iringa Urban	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Kilolo	501	83.4	0	0.0	100	16.6	0	0.0	0	0.0	601
Total	1,755	16.0	3,782	34.5	901	8.2	2,810	25.6	1,716	15.6	10,963

33.19e TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Land Registration Office and District, 2002/03 Agricultural Year

District	Satisfaction of Land Registration Office.										
	Very Good	%	Good	%	Average	%	Poor	%	No good	%	Total Number of households
	No.of households		No.of households		No.of households		No.of households		No.of households		
Iringa Rural	240	4.4	3206	58.2	1454	26.4	241	4.4	364	6.6	5505
Mufindi	0	0.0	1149	12.5	4095	44.6	2293	25.0	1653	18.0	9190
Njombe	264	4.7	4467	79.1	264	4.7	529	9.4	125	2.2	5649
Ludewa	121	4.7	1401	54.9	972	38.0	60	2.4	0	0.0	2554
Makete	0	0.0	0	0.0	128	6.5	1847	93.5	0	0.0	1975
Iringa Urban	12	13.9	39	43.7	25	27.7	13	14.7	0	0.0	90
Kilolo	96	9.0	483	45.3	196	18.4	100	9.3	192	18.0	1067
Total	734	2.8	10744	41.3	7133	27.4	5084	19.5	2334	9.0	26029

33.19f TYPE OF SERVICE: Number of Agricultural Households by Satisfaction of Using Livestock Development Center

District	Satisfaction of using Livestock Development Centre										Total Number of households
	Very Good	%	Good	%	Average	%	Poor	%	No good	%	
	No.of households		No.of households		No.of households		No.of households		No.of households		
Iringa Rural	360	5.7	4,593	72.8	1,120	17.8	120	1.9	118	1.9	6,311
Mufindi	370	7.4	1,024	20.5	772	15.5	1,286	25.8	1,535	30.8	4,987
Njombe	397	10.4	3,419	89.6	0	0.0	0	0.0	0	0.0	3,816
Ludewa	236	14.4	301	18.4	121	7.4	916	56.0	61	3.7	1,635
Makete	0	0.0	182	49.3	0	0.0	187	50.7	0	0.0	369
Iringa Urban	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Kilolo	96	12.3	288	37.0	295	37.9	100	12.8	0	0.0	780
Total	1,459	8.1	9,808	54.8	2,309	12.9	2,609	14.6	1,714	9.6	17,898

33.19g YPE OF SERVICE: Number of Agricultural Households by Level of Satisfaction of the Service and District for 2002/03 Agricultural year

TYPE OF SERVICE	LEVEL OF SATISFICATION OF THE SERVICE									
	Very Good		Good		Average		Poor		No good	
	No.of households	%	No.of households	%	No.of households	%	No.of households	%	No.of households	%
Veterinary Clinic	21,138	8	89,479	32	34,882	13	20,547	7	11,705	4
Extension Centre	13,423	16	49,135	59	14,801	18	3,392	4	1,839	2
Research Station	380	3	6,545	47	2,474	18	2,819	20	1,656	12
Plant Protection Lab.	1,755	16	3,782	34	901	8	2,810	26	1,716	16
Land Registration Office	734	3	10,744	41	7,133	27	5,084	20	2,334	9
Livestock Development Centre	1,459	8	9,808	55	2,309	13	2,609	15	1,714	10
OVERALL %		7		44		15		13		7

HOUSEHOLD FACILITIES

34-1: Number of Households by Type of Toilet and District, during the 2002/03 Agricultural Year

District	No Toilet / Bush	Flush Toilet	Traditional Pit Latrine	Improved Pit Latrine	Other type	Total
Iringa Rur	809	3,842	47,001	1,062	0	52,714
Mufindi	129	626	55,145	867	0	56,766
Njombe	663	911	76,278	920	0	78,772
Ludewa	122	826	23,096	482	0	24,527
Makete	189	863	23,988	187	0	25,227
Iringa Urb	0	12	1,124	26	0	1,162
Kilolo	96	1,539	37,229	686	0	39,549
Total	2,008	8,619	263,860	4,230	0	278,717

34.2: Number of households reporting average number of rooms and type of Roofing Materials by District, 2002/03 Agricultural Year

District	Number of rooms per households	Iron sheets	Tiles	Concrete	Asbestos	Grass / Leaves	Grass & Mud	Other	Total
Iringa Rur	3	22,873	234	121	121	19,384	9,980	0	52,714
Mufindi	3	23,962	884	0	129	25,308	6,483	0	56,766
Njombe	3	39,788	265	265	132	36,469	1,852	0	78,772
Ludewa	3	12,642	182	0	0	11,643	61	0	24,527
Makete	2	12,919	191	0	0	10,980	1,137	0	25,227
Iringa Urb	3	656	0	0	12	468	26	0	1,162
Kilolo	3	15,901	192	96	288	20,647	2,324	100	39,549
Total	3	128,741	1,949	483	683	124,899	21,862	100	278,717

34.3: Number of households type of Owned Asset and District, 2002/03 Agricultural Year

Type of Owned Asset	Iringa Rural		Mufindi		Njombe		Ludewa		Makete		Iringa Urban		Kilolo		Total	
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%
Radio	23,605	17	26,328	19	42,755	31	12,549	9	12,874	9	608	0	20,255	15	138,974	108.9
Landline phone	0	0	118	65	0	0	0	0	63	35	0	0	0	0	182	0.1
Mobile phone	2,138	44	1,367	28	133	3	469	10	126	3	12	0	577	12	4,823	3.8
Iron	10,866	15	15,694	22	21,636	31	6,544	9	5,902	8	345	0	9,626	14	70,613	55.3
Wheelbarrow	4,749	27	3,619	20	4,844	27	1,141	6	867	5	26	0	2,622	15	17,868	14.0
Bicycle	19,348	19	22,630	22	40,683	39	4,901	5	4,025	4	408	0	11,802	11	103,799	81.3
Vehicle	361	13	987	35	530	19	60	2	315	11	0	0	582	21	2,835	2.2
Television/Video	815	25	1,222	37	914	28	0	0	126	4	12	0	198	6	3,288	2.6
Total Number of Households	52,714	19	56,766	20	78,772	28	24,527	9	25,227	9	1,162	0	39,549	14	278,717	100.0

34.4: Number of Agricultural Households Source of Energy for Lighting and District, 2002/03 Agricultural Year

Type of Owned Asset	Iringa Rural		Mufindi		Njombe		Ludewa		Makete		Iringa Urban		Kilolo		Total	
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%
Main Electricity	1174	29	1457	36	612	15	488	12	121	3	12	0	198	5	4062	1.5
Solar	0	0	385	39	265	27	0	0	240	24	0	0	96	10	986	0.4
Gas(Biogas)	243	79	0	0	0	0	0	0	63	21	0	0	0	0	306	0.1
Hurricane Lamp	26,212	20	24,151	18	36,041	27	13,976	11	10,971	8	516	0	20,515	15	132,381	47.5
Prussure Lamp	1,859	20	2,153	24	1,590	17	424	5	1,368	15	77	1	1,674	18	9,145	3.3
Wick Lamp	22,565	18	28,238	22	38,821	30	9,032	7	11,526	9	557	0	16,873	13	127,611	45.8
Candles	121	67	0	0	0	0	61	33	0	0	0	0	0	0	182	0.1
Firewood	540	14	383	10	1,443	36	486	12	938	24	0	0	192	5	3,982	1.4
Other	0	0	0	0	0	0	61	100	0	0	0	0	0	0	61	0.0
Total	52,714	19	56,766	20	78,772	28	24,527	9	25,227	9	1,162	0	39,549	14	278,717	100.0

34.5: Number of Agricultural Households Source of Energy for Cooking and District, 2002/03 Agricultural Year

Type of Owned Asset	Iringa Rural		Mufindi		Njombe		Ludewa		Makete		Iringa Urban		Kilolo		Total	
	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%	Number of households	%
Main Electricity	1174	29	1457	36	612	15	488	12	121	3	12	0	198	5	4062	1.5
Solar	0	0	385	39	265	27	0	0	240	24	0	0	96	10	986	0.4
Gas(Biogas)	243	79	0	0	0	0	0	0	63	21	0	0	0	0	306	0.1
Hurricane Lamp	26,212	20	24,151	18	36,041	27	13,976	11	10,971	8	516	0	20,515	15	132,381	47.5
Prussure Lamp	1,859	20	2,153	24	1,590	17	424	5	1,368	15	77	1	1,674	18	9,145	3.3
Wick Lamp	22,565	18	28,238	22	38,821	30	9,032	7	11,526	9	557	0	16,873	13	127,611	45.8
Candles	121	67	0	0	0	0	61	33	0	0	0	0	0	0	182	0.1
Firewood	540	14	383	10	1,443	36	486	12	938	24	0	0	192	5	3,982	1.4
Other	0	0	0	0	0	0	61	100	0	0	0	0	0	0	61	0.0
Total	52,714	19	56,766	20	78,772	28	24,527	9	25,227	9	1,162	0	39,549	14	278,717	100.0

34.6: Number of Agricultural Households by Main Source of Drinking Water (Wet & Dry) and District during 2002/03

Source	Season	District						
		Iringa Rural	Mufindi	Njombe	Ludewa	Makete	Iringa Urban	Kilolo
Pipe water	Wet	22,747	13,092	26,348	8,337	12,046	38	8,451
	Dry	21,268	12,828	25,288	7,971	10,452	13	10,044
Protected Well	Wet	2,447	4,680	1,445	1,637	1,970	13	3,034
	Dry	2,687	5,684	1,710	1,639	2,353	65	3,034
Protected/Covered Spring	Wet	587	5,231	3,886	790	624	211	2,595
	Dry	1,290	4,366	5,889	790	751	211	3,076
Unprotected Well	Wet	9,274	13,681	15,650	4,498	5,672	272	8,434
	Dry	10,079	14,322	17,494	5,351	6,484	237	8,531
Surface Water(Lake/Dam/Riv	Wet	10,350	6,759	3,303	7,567	3,160	189	11,524
	Dry	10,902	6,886	2,517	7,259	3,673	376	10,020
Covered Rainy Water Catchment	Wet	0	0	263	121	64	53	96
	Dry	0	124	0	121	0	0	0
Uncovered Rain Water Catchment	Wet	951	768	4,375	61	185	132	1,064
	Dry	239	0	663	0	62	13	289
Water Vendor	Wet	0	0	132	0	0	0	0
	Dry	0	0	0	0	0	0	0
Tanker Truck	Wet	243	0	0	0	63	0	0
	Dry	364	0	0	0	64	0	0
Bottled Water	Wet	0	0	0	0	0	0	0
	Dry	0	0	0	0	0	0	0
Other	Wet	479	0	396	61	60	12	0
	Dry	0	0	0	0	0	0	0
Total Agricultural Households per District		93,907	88,419	109,358	46,202	47,684	1,835	70,193

34.7: Number of Agricultural Households by Main Source of Drinking Water (Wet & Dry) and District during 2002/03 Agricultural

Source	Season	District						
		Iringa Rural	Mufindi	Njombe	Ludewa	Makete	Iringa Urban	Kilolo
Pipe water	Wet	24	15	24	18	25	2	12
	Dry	23	15	23	17	22	1	14
Protected Well	Wet	3	5	1	4	4	1	4
	Dry	3	6	2	4	5	4	4
Protected/Covered Spring	Wet	1	6	4	2	1	12	4
	Dry	1	5	5	2	2	12	4
Unprotected Well	Wet	10	15	14	10	12	15	12
	Dry	11	16	16	12	14	13	12
Surface Water(Lake/Dam/River/Stream)	Wet	11	8	3	16	7	10	16
	Dry	12	8	2	16	8	20	14
Covered Rainy Water Catchment	Wet	0	0	0	0	0	3	0
	Dry	0	0	0	0	0	0	0
Uncovered Rain Water Catchment	Wet	1	1	4	0	0	7	2
	Dry	0	0	1	0	0	1	0
Water Vendor	Wet	0	0	0	0	0	0	0
	Dry	0	0	0	0	0	0	0
Tanker Truck	Wet	0	0	0	0	0	0	0
	Dry	0	0	0	0	0	0	0
Bottled Water	Wet	0	0	0	0	0	0	0
	Dry	0	0	0	0	0	0	0
Other	Wet	1	0	0	0	0	1	0
	Dry	0	0	0	0	0	0	0
Total Agricultural Households per District			100	100	100	100	100	100

34.8: Number of Agricultural Households Reporting Distance to Main Source of Drinking Water by Season (Wet & Dry) and District during 2002/03 agricultural year

Distance to Main Source of Drinking Water	Season	District						
		Iringa Rural	Mufindi	Njombe	Ludewa	Makete	Iringa Urban	Kilolo
Less than 100m	Wet	10,394	5,921	11,227	6,870	5,403	518	5,242
	Dry							
100 - 299 m	Wet	7,775	10,425	12,777	7,471	9,991	12	8,530
	Dry							
300 - 499 m	Wet	5,804	3,282	5,005	2,308	1,311	131	4,329
	Dry							
500 - 999 m	Wet	11,560	15,068	22,985	4,962	4,606	195	10,352
	Dry							
1 - 1.99 m	Wet	12,534	16,635	18,767	2,432	2,332	156	6,840
	Dry							
2 - 2.99 m	Wet	2,035	4,302	4,202	422	1,011	126	3,452
	Dry							
3 - 4.99 m	Wet	1,540	1,015	2,901	61	574	25	306
	Dry							
5 - 9.99 m	Wet	1,072	119	909	0	0	0	499
	Dry							
10 Km and above	Wet	0	0	0	0	0	0	0
	Dry	0	0	0	0	0	0	0

34.9: Proportion Number of Agricultural Households Reporting Distance to Main Source of Drinking Water by Season (Wet & Dry) and District during 2002/03 agricultural year

Distance to Main Source of Drinking Water	Season	District						
		Iringa Rural	Mufindi	Njombe	Ludewa	Makete	Iringa Urban	Kilolo
Less than 100m	Wet	20	10	14	28	21	45	13
	Dry	0	0	0	0	0	0	0
100 - 299 m	Wet	15	18	16	30	40	1	22
	Dry	0	0	0	0	0	0	0
300 - 499 m	Wet	11	6	6	9	5	11	11
	Dry	0	0	0	0	0	0	0
500 - 999 m	Wet	22	27	29	20	18	17	26
	Dry	0	0	0	0	0	0	0
1 - 1.99 m	Wet	24	29	24	10	9	13	17
	Dry	0	0	0	0	0	0	0
2 - 2.99 m	Wet	4	8	5	2	4	11	9
	Dry	0	0	0	0	0	0	0
3 - 4.99 m	Wet	3	2	4	0	2	2	1
	Dry	0	0	0	0	0	0	0
5 - 9.99 m	Wet	2	0	1	0	0	0	1
	Dry	0	0	0	0	0	0	0
10 Km and above	Wet	0	0	0	0	0	0	0
	Dry	0	0	0	0	0	0	0

34.10: Number of Agricultural Households Reporting Distance to Main Source of Drinking Water by Season (Wet & Dry) and District during 2002/03 agricultural year

Time Spent to and from Main Source of drinking Water	Season	District						
		Iringa Rural	Mufindi	Njombe	Ludewa	Makete	Iringa Urban	Kilolo
Less than 10 minute	Wet	2,268	2,367	8,985	4,223	2,705	51	2,231
	Dry	1,381	2,233	5,279	4,285	2,965	38	2,044
10 - 19 Minutes	Wet	15,001	16,822	18,751	7,586	8,251	325	11,424
	Dry	12,321	16,189	19,282	7,648	8,003	197	10,341
20 - 29 Minutes	Wet	7,365	9,350	13,506	3,453	3,885	300	8,442
	Dry	6,243	8,847	13,240	3,572	3,806	194	7,855
30 - 39 Minutes	Wet	10,395	16,109	21,106	3,948	5,072	321	10,539
	Dry	10,030	16,348	22,211	3,766	5,197	372	11,041
40 - 49 Minutes	Wet	3,338	4,620	3,827	1,266	1,375	13	2,839
	Dry	3,096	5,005	4,318	1,329	1,564	26	3,038
50 - 59 Minutes	Wet	4,552	2,403	4,879	2,541	1,765	51	96
	Dry	5,142	2,281	5,011	2,298	1,638	0	585
Above one hour	Wet	9,794	5,095	7,717	1,509	2,173	101	3,977
	Dry	14,501	5,863	9,430	1,629	2,054	334	4,647
		105427	113532	157544	49054	50454	2325	79098

34.11: Proportion Number of Agricultural Households Reporting Distance to Main Source of Drinking Water by Season (Wet & Dry) and District during 2002/03 agricultural year

Distance to Main Source of Drinking Water	Season	District						
		Iringa Rural	Mufindi	Njombe	Ludewa	Makete	Iringa Urban	Kilolo
Less than 10 minute	Wet	2	2	6	9	5	2	3
	Dry	1	2	3	9	6	2	3
10 - 19 Minutes	Wet	14	15	12	15	16	14	14
	Dry	12	14	12	16	16	8	13
20 - 29 Minutes	Wet	7	8	9	7	8	13	11
	Dry	6	8	8	7	8	8	10
30 - 39 Minutes	Wet	10	14	13	8	10	14	13
	Dry	10	14	14	8	10	16	14
40 - 49 Minutes	Wet	3	4	2	3	3	1	4
	Dry	3	4	3	3	3	1	4
50 - 59 Minutes	Wet	4	2	3	5	3	2	0
	Dry	5	2	3	5	3	0	1
Above one hour	Wet	9	4	5	3	4	4	5
	Dry	14	5	6	3	4	14	6

34.12: Number of Households by Number of Meals the household Normally Took per Day by District

Number of Meals per Day	District															
	Iringa Rural		Mufindi		Njombe		Ludewa		Makete		Iringa Urban		Kilolo		Total	
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
One	3,403	53	386	6	918	14	1,017	16	185	3	24.99	0.4	488	8	6,421	2.3
Two	34,053	20	31,635	19	48,022	29	14,669	9	14,987	9	827.53	0.5	23,827	14	168,019	60.3
Three	14,440	14	24,745	24	29,712	29	8,841	9	9,994	10	309.90	0.3	15,235	15	103,278	37.1
Four	818	82	0	0	119	12	0	0	62	6	0.00	0.0	0	0	999	0.4
Total	52,714	19	56,766	20	78,772	28	24,527	9	25,227	9	1,162.41	0.4	39,549	14	278,717	100.0

34.13: Number of Households by Number of Days the household Consumed Meat during the Preceding Week by District

Number of Meals per Day	District														Total	
	Iringa Rural		Mufindi		Njombe		Ludewa		Makete		Iringa Urban		Kilolo			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Not Eaten	12,945	18	15,480	21	25,147	35	5,368	7	5,636	8	234	0	7,286	10	72,096	25.9
One	19,167	0	21,695	0	33,889	0	11,749	0	11,004	0	490	0	15,667	0	113,662	25.9
Two	12,977	21	12,700	20	15,174	24	4,854	8	5,775	9	296	0	10,449	17	62,225	22.3
Three	5,363	24	4,866	22	3,422	15	1,887	9	2,056	9	116	1	4,400	20	22,110	7.9
Four	1,490	26	1,523	27	503	9	426	7	502	9	13	0	1,262	22	5,719	2.1
Five	650	31	502	24	252	12	184	9	189	9	13	1	294	14	2,083	0.7
Six	0	0	0	0	384	86	61	14	0	0	0	0	0	0	445	0.2
Seven	121	32	0	0	0	0	0	0	64	17	0	0	192	51	377	0.1
Total	52,714	19	56,766	20	78,772	28	24,527	9	25,227	9	1,162	0.4	39,549	14	278,717	100.0

34.14: Number of Households by Number of Days the household Consumed Fish during the Preceding Week by District

Number of Meals per Day	District														Total	
	Iringa Rural		Mufindi		Njombe		Ludewa		Makete		Iringa Urban		Kilolo			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Not Eaten	14,619	12	25,493	21	43,875	36	9,649	8	12,212	10	400	0	14,004	12	120,253	43.1
One	20,412	21	17,768	19	25,743	27	7,772	8	9,386	10	387	0	13,935	15	95,403	34.2
Two	11,163	27	9,496	23	6,931	17	2,309	6	3,132	8	233	1	7,494	18	40,757	14.6
Three	4,386	0	2,757	20	1,958	14	1,701	12	308	2	90	1	2,660	19	13,861	5.0
Four	1,239	25	624	12	265	5	1,331	27	64	1	38	1	1,455	29	5,017	1.8
Five	774	37	247	12	0	0	970	47	61	3	13	1	0	0	2,065	0.7
Six	0	0	255	41	0	0	0	0	0	0	0	0	0	0	622	0.2
Seven	120	16	127	17	0	0	428	58	63	9	0	0	0	0	738	0.3
Total	52,714	19	56,766	20	78,772	28	24,527	9	25,227	9	1,162	0	39,549	14	278,717	100.0

34.15: Number of Households Reporting the status of food satisfaction of the households during the Preceding Year by District

Number of Meals per Day	District														Total	
	Iringa Rural		Mufindi		Njombe		Ludewa		Makete		Iringa Urban		Kilolo			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Never	24,657	14	32,618	19	54,119	32	18,411	11	19,104	11	556	0	21,940	13	171,406	61
Seldom	13,862	23	16,240	26	12,397	20	4,357	7	4,408	7	427	1	9,832	16	61,523	22
Sometimes	5,585	29	2,553	13	5,796	30	789	4	869	4	13	0	3,804	20	19,408	7
Often	5,331	33	3,177	19	3,564	22	666	4	783	5	141	1	2,687	16	16,350	6
Always	3,278	33	2,178	22	2,897	29	303	3	63	1	26	0	1,285	13	10,029	4
Total	52,714	19	56,766	20	78,772	28	24,527	9	25,227	9	1,162	0	39,549	14	278,717	100

34.16: Number of Households Reporting Main Source of Income by District, 2002/03 Agricultural Year

Number of Meals per Day	District														Total	
	Iringa Rural		Mufindi		Njombe		Ludewa		Makete		Iringa Urban		Kilolo			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Sales of Food Crops	14,283	11	18,817	14	41,417	32	17,203	13	15,653	12	51	0	22,791	18	130,216	47
Sales of Livestock	929	20	1,140	24	1,577	34	486	10	246	5	0	0	297	6	4,675	2
Sales of Livestock	0	0	127	9	524	38	237	17	0	0	0	0	504	36	1,392	0
Sales of Cash Crops	1,566	15	2,041	20	1,592	15	426	4	125	1	12	0	4,611	44	10,373	4
Sales of Forest	1,780	25	635	9	2,120	30	242	3	1,938	28	13	0	294	4	7,022	3
Business Income	12,301	33	7,981	22	9,159	25	1,269	3	2,773	8	659	2	2,648	7	36,792	13
Wages & salaries in Other Casual	3,094	19	7,516	47	3,017	19	777	5	1,238	8	51	0	195	1	15,889	6
Cash	12,865	26	13,779	28	12,638	25	2,315	5	1,892	4	349	1	5,730	12	49,567	18
Cash Remittances	3,817	25	3,990	26	5,014	32	423	3	1,113	7	26	0	1,086	7	15,470	6
Fishing	283	20	129	9	0	0	908	63	127	9	0	0	0	0	1,446	1
Other	1,795	32	609	11	1,715	30	181	1	0	0	0	0	1,393	24	5,693	2
Not applicable	0	0	0	0	0	0	61	33	123	67	0	0	0	0	183	0
Total	52,714	19	56,766	20	78,772	28	24,527	9	25,227	9	1,162	0	39,549	14	278,717	100

34.17: HOUSEHOLD FACILITIES: Number of households reporting average number of rooms and type of Roofing Materials by District, 2002/03 Agricultural Year

Roofing Materials	District														Total	
	Iringa Rural		Mufindi		Njombe		Ludewa		Makete		Iringa Urban		Kilolo			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Iron Sheets	22,873	17.8	23,962	18.6	39,788	30.9	12,642	9.8	12,919	10.0	656	0.5	15,901	12.4	128,741	46.2
Tiles	234	12.0	884	45.4	265	13.6	182	9.3	191	9.8	0	0.0	192	9.9	1,949	0.7
Concrete	121	25.1	0	0.0	265	55.0	0	0.0	0	0.0	0	0.0	96	19.9	483	0.2
Asbestos	121	17.8	129	18.8	132	19.3	0	0.0	0	0.0	12	1.8	288	42.2	683	0.2
Grass/Leaves	19,384	15.5	25,308	20.3	36,469	29.2	11,643	9.3	10,980	8.8	468	0.4	20,647	16.5	124,899	44.8
Grass & Mud	9,980	45.6	6,483	29.7	1,852	8.5	61	0.3	1,137	5.2	26	0.1	2,324	10.6	21,862	7.8
Other	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	100	100.0	100	0.0
Total	52,714	18.9	56,766	20.4	78,772	28.3	24,527	8.8	25,227	9.1	1,162	0.4	39,549	14.2	278,717	100.0

34.18: HOUSEHOLD FACILITIES: Number of Agricultural Households Reporting Main Source of Energy for Cooking by District, 2002/03

Roofing Materials	District														Total	
	Iringa Rural		Mufindi		Njombe		Ludewa		Makete		Iringa Urban		Kilolo			
	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%	Number of Households	%
Main Electricity	234	68.18	0	0.00	0	0.00	0	0.00	0	0.00	13	3.85	96	27.97	344	0.12
Solar	0	0.00	0	0.00	264	100.00	0	0.00	0	0.00	0	0.00	0	0.00	264	0.09
Gas(Biogas)	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Bottled Gas	0	0.00	0	0.00	132	20.69	61	9.61	251	39.49	0	0.00	192	30.21	636	0.23
Parraffin/Kerocine	56	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	56	0.02
Charchoal	715	28.50	129	5.13	1,047	41.72	122	4.85	63	2.51	51	2.03	383	15.25	2,508	0.90
Firewood	51,231	18.71	56,510	20.64	77,198	28.19	24,223	8.85	24,726	9.03	1,085	0.40	38,878	14.20	273,851	98.25
Crop Residues	359	38.25	127	13.52	132	14.05	121	12.93	186	19.84	13	1.41	0	0.00	940	0.34
Livestrockvck Dung	118	12.51	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	118	0.04
Number of households	52,714	18.91	56,766	20.37	78,772	28.26	24,527	8.80	25,227	9.05	1,162	0.42	39,549	14.19	278,717	100.00

APPENDIX III QUESTIONNAIRES

UNITED REPUBLIC OF TANZANIA

Confidential



Page Number

Agriculture Sample Census 2002/03



ACLF 1: Sub-village leader listing form

Region _____ Code <input style="width:40px;" type="text"/>	Ward _____ Code <input style="width:40px;" type="text"/>
District _____ Code <input style="width:40px;" type="text"/>	Village _____ Code <input style="width:40px;" type="text"/>

Name of Village Chairman:.....

Sub-village leader number	Name of sub-village leader	Number of households		Comments
		From office register	After enumeration	
(1)	(2)	(3)	(4)	(5)
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<input style="width:30px;" type="text"/>		<input style="width:40px;" type="text"/>	<input style="width:40px;" type="text"/>	
Total		<input style="width:40px;" type="text"/>	<input style="width:40px;" type="text"/>	

Name of enumerator..... Signature Date.....

Name of supervisor..... Signature Date.....

UNITED REPUBLIC OF TANZANIA



Confidential

Interval
Starting point

Page Number.....

Agriculture Sample Census 2002/03

ACLF: 2 Household listing form - form for listing household heads and their agriculture activities

Region _____	Code <input style="width: 20px; height: 15px;" type="text"/>	Name of Sub-village Leaaader _____
District _____	Code <input style="width: 20px; height: 15px;" type="text"/>	Subvillage leader code <input style="width: 20px; height: 15px;" type="text"/>
Ward _____	Code <input style="width: 20px; height: 15px;" type="text"/>	
Village _____	Code <input style="width: 20px; height: 15px;" type="text"/>	Name of Sub-village _____



Household Number	Household head name	Number of										✓ if the respondent qualifies to be a farmer *	Farmer Serial Numbers
		Fields +	Cattle				Goats	Sheep	Pigs	poultry/ducks	Rabbit		
			Total Number	Adult male cattle	Adult female cattle	Calves							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<input type="text"/>													
<input type="text"/>													
<input type="text"/>													
<input type="text"/>													
<input type="text"/>													
<input type="text"/>													
<input type="text"/>													
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<input type="text"/>													
<input type="text"/>													
<input type="text"/>													
<input type="text"/>													
<input type="text"/>													
<input type="text"/>													
Totals													

* **NOTE:** (Column 13) Place a "✓" if the household has at least 1 field over 25m² and/or keeps at least 1 Cow, 5 Goats/Sheep/Pigs or 50 Chicken/poultry or ducks

+ (Column 3) A field must be at least 25 m²

Name of enumerator..... Signature Date.....

Name of supervisor..... Signature Date.....

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National Agriculture Sample Census 2002/03

ACLF: 3 Household listing of 15 selected farmers

Region _____
 District _____
 Ward _____
 Village _____

Code
 Code
 Code
 Code






S/N	Sub village leader number		Name of sub-village leader	Agriculture hh serial number	Name of selected head of household	Number of							
	(1)	(2)				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
01				<input type="text"/> <input type="text"/> <input type="text"/>									
02				<input type="text"/> <input type="text"/> <input type="text"/>									
03				<input type="text"/> <input type="text"/> <input type="text"/>									
04				<input type="text"/> <input type="text"/> <input type="text"/>									
05				<input type="text"/> <input type="text"/> <input type="text"/>									
06				<input type="text"/> <input type="text"/> <input type="text"/>									
07				<input type="text"/> <input type="text"/> <input type="text"/>									
08				<input type="text"/> <input type="text"/> <input type="text"/>									
09				<input type="text"/> <input type="text"/> <input type="text"/>									
10				<input type="text"/> <input type="text"/> <input type="text"/>									
11				<input type="text"/> <input type="text"/> <input type="text"/>									
12				<input type="text"/> <input type="text"/> <input type="text"/>									
13				<input type="text"/> <input type="text"/> <input type="text"/>									
14				<input type="text"/> <input type="text"/> <input type="text"/>									
15				<input type="text"/> <input type="text"/> <input type="text"/>									

Name of Enumerator: _____ Signature _____ Date _____

Name of Supervisor _____ Signature _____ Date _____

Ministry of Agriculture and Food Security, Ministry of Water and Livestock Development, Ministry of
 Cooperatives and Marketing and the National Bureau of Statistics

United Republic of Tanzania		
ACQ 1		CONFIDENTIAL
Small holder/Small Scale Farmer Questionnaire		
Agriculture Sample Census		
2002/2003		
		

Enumerator	Name	Signature									
	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Hour</td> <td style="width: 50%; text-align: center;">Minutes</td> </tr> <tr> <td style="text-align: center;"> <input type="text"/> <input type="text"/> </td> <td style="text-align: center;"> <input type="text"/> <input type="text"/> </td> </tr> <tr> <td style="text-align: center;">Start time</td> <td style="text-align: center;">End time</td> </tr> <tr> <td style="text-align: center;"> <input type="text"/> <input type="text"/> </td> <td style="text-align: center;"> <input type="text"/> <input type="text"/> </td> </tr> </table>	Hour	Minutes	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	Start time	End time	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
Hour	Minutes										
<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>										
Start time	End time										
<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>										
Field level checking by:			<i>To be completed by the supervisor ONLY after field/farm level checking of the enumeration process. This should be countersigned by the enumerator.</i>								
District Supervisor:	Name	signature		Date .. / .. / ..							
Regional Supervisor:	Name	signature		Date .. / .. / ..							
National Supervisor:	Name	signature		Date .. / .. / ..							
District checking in Office:			<i>All questionnaires must be checked at the district office.</i>								
District Supervisor	Name	signature		Date .. / .. / ..							
For Use at National Level only:			<i>See back page for details of query</i>								
Data Entered by	Name	signature		Date .. / .. / ..							
Queried	Name	signature		Date .. / .. / ..							

Executed by the Ministry of Agriculture and Food Security, Ministry of Water and Livestock Development,
 Ministry of Cooperatives and Marketing
 and
 National Bureau of Statistics

1.0 IDENTIFICATION DETAILS			
1.1 Location			
S/N	Location Name	Codes	
1.1.1	Region	<input type="text"/> <input type="text"/>	
1.1.2	District	<input type="text"/>	
1.1.3	Ward	<input type="text"/> <input type="text"/> <input type="text"/>	
1.1.4	Village	<input type="text"/> <input type="text"/>	
1.2 Details of the respondent and household head			
S/N		Codes	
1.2.1	Name & number of local leader	<input type="text"/> <input type="text"/> <input type="text"/>	
1.2.2	Name & number of household head	<input type="text"/> <input type="text"/>	
1.2.3	Sex of household head (Male = 1, Female = 2)	<input type="text"/> <input type="text"/>	
1.2.4	Name of respondent	<input type="text"/> <input type="text"/>	
1.2.5	Relationship of Respondent to Household Head		
<p>Relationship to household head codes (Q 1.2.5) Head of Household.....1 Son/Daughter3 Grandson/Granddaughter5 Other (friend, employee, etc)...8 Spouse2 Father/Mother4 Other relative.....6</p>			
2.0 ACTIVITIES OF THE HOUSEHOLD			
2.1	Type of Agriculture Household	<input type="text"/>	
<p>Agriculture household codes(Q2.1) Crops only.....1 Livestock only2 Pastoralist.....3 Crops and Livestock4</p>			
2.2	Rank the following livelihood activities/source of income of the household in order of importance		
S/N	Livelihood/source of income activity.	Rank in order of importance 1=most 7=least	How important are each of these activities expressed in percentage.
	(1)	(2)	(3)
2.2.1	Annual Crop farming	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> %
2.2.2	Permanent crop farming	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> %
2.2.3	Livestock keeping/herding	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> %
2.2.4	Off Farm Income	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> %
2.2.5	Remittances	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> %
2.2.6	Fishing/hunting and gathering	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> %
2.2.7	Tree/forest resources (eg honey, firewood, timber,etc)	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> %
			<input type="text"/> <input type="text"/> <input type="text"/> %

Definition and working page for page 1**General Definitions****Small holder hh/small scale farm:**

Should have between 25sq metres and 20 Hectares under production, and/or between 1 and 50 head of Cattle, and/or between 5 and 100 head of Sheep/Goats/Pigs, and/or between 50 and 1000 chickens/turkeys/ducks/rabbits.

Household: A group of people who occupy the whole or part of one or more housing units and makes joint provisions for food and/or other essentials for living.

Household Head: A person who is acknowledged by all other members of the household either by virtue of his age or standing in the household as the head. He/she should be a permanent resident of the house and he/she is the main person responsible for making decisions.

Agricultural Holding: This is an economic unit of agricultural production under single management. It consists of all livestock kept and all land used for agricultural production without regard to title. For the purpose of this survey, the agricultural holdings are restricted to those which meet one of the following conditions:

- Having or operated at least 25 sq meter of arable land
- Own or keep at least one head of cattle or five goats/sheep/pigs or fifty chicken/ducks/turkeys during the agricultural year 2002/03 (October 2002 to September 2003) .

Question Specific Definitions:**Type of Agriculture Holdings Codes (Q2.1):**

- **Crops only:** A holding is referred to be a crops only holding if it has cultivated a piece of land equal or exceeding 25 sq Meter. This also applies to all households owning or have kept livestock whose number does not qualify such household to be an agricultural holding (No cattle, less than 5 goats/sheep/pigs, less than 50 chickens/turkeys/ducks/rabbits)

- **Livestock only:** A holding is referred to be a Livestock only holding if it has exercised Livestock husbandry only during the agricultural year. The livestock can be herded in search for areas of pasture, but the core household unit always remains in the same place and the herder is rarely away from this place for long periods at a time.

- **Livestock pastoralism:** This refers to a household which practices livestock production as its major income generating activity and a means of subsistence, but moves from one place to another searching for water and pasture for the livestock. This movement usually involves long distances and in many cases the whole household unit moves with the livestock and they have no permanent place of residence.

For both livestock only and pastoralism , the number of livestock has to be at least 1 head of cattle, 5 goats/sheep/pigs or 50 chickens/turkeys/ ducks/rabbits. This also applies to all households owning or have cultivated a piece of land less than 25 sq meter, which does not qualify such household be an agricultural holding.

- **Both crops and livestock:** A holding is referred to be a both crops and livestock if it has cultivated a piece of land equal or exceeding 25 sq meter and if such households is owning or have kept livestock whose number qualify such household be an agricultural holding.

Important livelihood activities/source of income (Q 2.2):

- **Crop farming:** This refers to a household where crop production is its major means of subsistence and income generation.

- **Livestock farming/herding/pastoralism:** This refers to a household where livestock farming/herding is its major means of subsistence & income generation.

- **Off Farm Income** This refers to cash generated from activities other than from the households holding. This can be from permanent employment (eg government/other), temporary employment/labouring and includes cash generated from working on other farmers farms.

-**Remittances:** Assistance from family members who are not currently part of the household, or from a relative or family friend. This assistance is usually in the form of cash but it can also be in-kind (eg food, clothes, building material, farm tools, etc). The money is a gift and is not paid back.

-**Fishing/hunting and gathering** The use of non farmed resources for food eg fishing, hunting wildlife and gathering mushrooms, berries, wild honey roots from uncultivated land.

Procedures for Questions:**Q 2.1 Type of agriculture household/holding**

1. Using the options under the question classify the type of agriculture hh/holding

Note: If the hh had 1 acre of crops and raised 40 chickens during 2002/03 it is classified as '**Crops only**' as the number of chickens do not qualify the hh as keeping livestock.

Q 2.2 Important hh livelihood activities /source of income

1. Read the list in column 1 to the respondent and ask him to rank them in order of importance during the reference year.

2. In column 2 Indicate the importance of each activity by placing '1' against the most important, '2' against the second most important, etc until you reach '7' the least important activity/source of income.

Note: You must attempt to fill in all boxes. Most households will carry out these activities to a greater or lesser degree. You will normally have to probe to get remittances.

If the hh did not undertake an activity during the 2002/2003 agriculture year then mark the appropriate box in column 2 with an 'X'.

3. For each activity/source of income assign a percentage. The enumerator should assist the respondent in assigning the percentage based on the information provided by the farmer.

4. After completing column 3 make sure the percentages add up to 100.

Note: It is not essential to be 100% accurate. This question is just to give the relative importance of the different items in general terms

3.0 HOUSEHOLD INFORMATION

3.1 Give details of personal **particulars** of all household members beginning with the head of the household

Not applicable for children under 5 years of age

S/N	Names of household members	Relation-ship to head	Sex M=1 F=2	Age (if age is above 99 years then write 99)	Survival of Parents		Read & Write	Edu- cation Status	Education Level reached	Invol- vemen in farmin	Main activity (for aged 5 & above)	Off-farm Income Yes=1 No=2
					Mo- ther	Fa- ther						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
3.1.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Relation to head (Col 2)**
- Head of household1
 - Spouse2
 - Son/daughter3
 - Father/Mother4
 - Grandson/granddaughter .5
 - Other Relative6
 - Others8

- Education Status (Col 8)**
- Attending School1
 - Completed2
 - Never attended School3

- Involvement in farming activities (Col 10)**
- Works full time on farm ...1
 - Works part-time on farm 2
 - Rarely works on farm3
 - Never works on farm.....4

- Main activity (Col 11)**
- Crop Farming01
 - Livestock Keeping/Herding..02
 - Livestock Pastoralism.....03
 - Fishing04
 - Paid employment:
 - Government/parastatal05
 - Private- NGO/mission/etc .06
 - Self employed (non farming)
 - with employees07
 - without employees08
 - Unpaid family helper (non agriculture)09
 - Not working & available.....10
 - Not working & unavailable...11
 - Housemaker/housewife12
 - Student13
 - Unable to work /too old/ Retired/sick/disabled).....14
 - Other98

- Survival of Parents (Col 5 & 6)**
- Yes1
 - No2
 - Don't know3

- Education Level Reached (Col 9)**
- | | |
|--|---|
| Primary Education | Secondary Education |
| Not of school ageNA | Form one11 |
| Under Standard One 00 | Form two12 |
| Standard One01 | Form three13 |
| Standard Two02 | Form four14 |
| Standard Three03 | Form five15 |
| Standard Four04 | Form six16 |
| Standard Five05 | Training after Secondary Education17 |
| Standard Six06 | University & other tertiary Education18 |
| Standard Seven07 | Adult Education19 |
| Standard Eight08 | Not applicable99 |
| Training after Primary Education09 | |
| Pre Form One10 | |

- Read & Write (Col 7)**
- Swahili1
 - English2
 - Swahili & English3
 - Any other language4
 - Don't Read/ Write5

Definition and working page for page 2**Question Specific Definitions:****Relation to head (Col 2):**

- **Household Head:** A person who is acknowledged by all other members of the household either by virtue of their age or standing as the household head.

Read and Write (Col 7):

- **Any other language:** Must be a written language.

For someone who can read and write in Swahili and any other language apart from English, the correct code is 1. For one who can read and write in English and any other language apart from Swahili the correct code is 2. Code 4 should only be used for another language but not English or Swahili

Education Level Reached (Col 9):

Indicate the highest level only. For those still attending school fill in the last year reached before the survey period. For example if a hh member is currently in standard 7 this year his highest grade reached is standard 6

Main Activity (Col 11):

- **Crop farming:** The persons main activity is crop production. This can be annual crops, vegetables, permanent crops or tree farming.

- **Livestock farming/herding:** The persons main activity is livestock farming/herding. The livestock can be herded in search for areas of pasture, but the core household unit always remains in the same place and the herder is rarely away from this place for long periods at a time. This category also includes fish farming but not fishing.

- **Livestock pastoralism:** The persons main activity is in moving livestock from one place to another searching for water and pasture for the livestock. This movement usually involves long distances and in many cases the whole household unit moves with the livestock and they may have no permanent place of residence.

- **Paid employment** - In full time employment earning a cash income

- Government/Parastatal - In full time employment for a government Ministry, Department or Board that is controlled by the Government
- Private/NGO/Mission/etc - employed by Non public/government organisation

- **Self employee** - works for own business for cash income

- With employees - Works for own business for cash and employs other workers

- Without employees - Works for own business for cash but does not employ other workers

- **Not working but available to work** - No productive activity but would like to have one.

- **Not working & nor available for work** - No productive activity and does not want to have one.

- **Unable to work** too old, too young, retired, disabled, etc

Off-farm Income (Col 12) - Income made from activities NOT on the HH's farming activities. This can be any off farm income generation activity and includes working for cash on other peoples farms.

Indicate whether each member was involved in an off farm income generating activity during 2002/03

Overview to section 3.0**Section 3.0 - Preliminary note**

1. Make sure that you define the hh properly to ensure that all the members of the hh are included. Make sure you stress that the hh is not just the hh heads direct family and that it includes other people living and eating together with the family.

2. If you notice that his house is large or you see many people around his house and he has only given you small number of hh members enquire further until you are sure that you have captured all the hh members.

Procedures for questions**Section 3.0 - Household Information**

1. For each household member complete columns 1, 2 & 3.

2. After completing columns 1, 2 & 3 for each household member go back to the first household member and complete the remaining columns for that member.

3. Repeat step 2 for the rest of the household members

IMPORTANT NOTE:

Cross check responses in columns 11 and 12 with section 2 especially in relation to:

off-farm income - if a hh member was involved in off farm income then there should be a response in question 2.2.4 and vice versa.

4.0 LAND ACCESS/OWNERSHIP/TENURE			
4.1 Details of area "owned" by the household in the 2002/03 agricultural year. Give area reported by the respondent in "acres".		Area in Acres	
4.1.1	Area Leased/Certificate of ownership	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	4.2 Was all land available to the hh used during 2002/03 (Yes=1, No=2) <input type="checkbox"/>
4.1.2	Area owned under Customary Law	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
4.1.3	Area Bought from others	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	4.3 Do you consider that you have sufficient land for the hh (Yes=1, No=2) <input type="checkbox"/>
4.1.4	Area Rented from others	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
4.1.5	Area Borrowed from others	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	4.4 Do any female members of the hh own or have customary right to land (Yes=1, No=2) <input type="checkbox"/>
4.1.6	Area Share -cropped from others	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
4.1.7	Area under Other forms of tenure	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
Total area		<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	

5.0 LAND USE			
5.1 Area operated by household under different forms of land use during 2002/03 agriculture year. Give area reported by the respondent in "acres".		Area in Acres	
			Calculation area
5.1.1	Area under Temporary Mono-crops	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.2	Area under Temporary Mixed crops (eg Maize & beans)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.3	Area under Permanent Mono-crops	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.4	Area under Permanent Mixed crops (eg bananas, coffee & trees)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.5	Area under Permanent/temporary mix (eg bananas & maize)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.6	Area under Pasture	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.7	Area under Fallow	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.8	Area under Natural Bush	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.9	Area under Planted Trees	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.10	Area Rented to others	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.11	Area Unusable	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
5.1.12	Area of Uncultivated Usable land (excluding fallow)	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	
Total area		<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/>	

6.0 ACCESS AND USE OF RESOURCES

6.1 In the following table indicate the distance to the different fields used by the household

S/N	Field Number	Distance (in kilometres) from field to:			Distance codes less than 100m1 between 2 and 3km6 between 100 and 300m ..2 between 3 and 5km7 between 300 and 500m ..3 between 5 and 10 km ..8 between 500 and 1km....4 Over 10 km9 between 1 and 2km5
		Homestead	Nearest road	Nearest Market	
6.1.1	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	
6.1.2	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	
6.1.3	3	<input type="text"/>	<input type="text"/>	<input type="text"/>	

6.2 In the following table indicate the distance and use of the following communal resources

S/N	Communal Resource	Distance to resource (km)		Main hh use	Instructions for distance to resource (Col 2 and 3): If under 1km, write 0 If above 1km round to whole numbers eg 1.5km= 2km, 1.25km= 1km
		dry season	wet season		
	(1)	(2)	(3)	(4)	
6.2.1	Water for humans	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	Main hh use (Col 4) Home or farm Consumption/utilisation.....1 Sold to Neighbours.....2 Sold to trader on the farm.....3 Sold to village market4 Sold to local wholesale market.....5 Sold to major wholesale market6 Not used by household.....7 Not available8
6.2.2	Water for livestock	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	
6.2.3	Communal Grazing	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	
6.2.4	Communal Firewood	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	
6.2.5	Wood for Charcoal	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	
6.2.6	Building poles	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	
6.2.7	Forest for bees (honey)	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	
6.2.8	Hunting (animal products)	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	
6.2.9	Fishing (Fish)	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	

Definition and working page for page 3

Question Specific Definitions

Section 4.1 - Land Access/Ownership

Lease/Certificate of Ownership Area under lease/certificate of ownership refers to the area for which the household possesses a government issued leasehold title or certificate of ownership. The land will normally be officially surveyed and boundaries marked. This includes leased land bought from others where the lease/certificate of ownership has been transferred.

Customary Law: This refers to the land which the hh does not have an official government title to but its right of use is granted by the traditional leaders. This user-right agreement does not have to be granted directly by the village leaders as right of access may be passed on through heredity.

Bought: This refers to the area of customary land that has been bought from others. This land does not have an official title and therefore is not leasehold.

Rented from others: Land rented from others for Cash or for a fixed amount in crop produce (eg fixed number of bags at harvest).

Borrowed: Use granted by land owner free of charge. Land owner can either be a lease holder or has right of access through customary law.

Share Cropping: where the hh is permitted to use land which is then paid for from a percentage of the harvested crop.

Section 5.0 Land Use

- **Temporary crops:** are sown and harvested during the same agricultural year

- **Permanent crops:** are sown or planted once and then , they occupy the land for some years and need not to be replanted after each annual harvest. Permanent crops are mainly trees (e.g., apples) but also bushes and shrubs (e.g., berries), palms (e.g., dates), vines (e.g., grapes), herbaceous stems (e.g., bananas) and stemless plants (e.g., pineapples).

- **Mixed Crops:** This is a mixture of two or more crops planted together and mixed in the same plot/field. The two crops can either be randomly planted together or they can be planted in a particular pattern eg intercropping (1 row of maize and 1 row of beans). A field that has been divided into plots for different crops is not mixed. This is further subdivided into:

Permanent Mixed -two or more permanent crops grown together,
Permanent/Temporary Mix - permanent crop and annual crop together,
Temporary Mixed - two or more temporary, annual crops grown together.

- **Pasture Land:** This is an area of owned/allocated land which is set aside for livestock grazing. It can be improved pasture where the farmer has planted grass, applied fertilized or applied other production increasing technologies to improve the grazing. Or it can be rough pasture.

- **Fallow:** This is the area of land that is normally used for crop production, but is not used for crop production during a year or a number of years. This is normally to allow for self generation of fertility/soil structure and is often an integral part of the crop rotation system.

- **Natural Bush:** Land which is considered productive but is not under cultivation or used extensively for livestock production and has naturally growing shrubs and trees.

- **Planted trees:** Land which is used for planting trees for poles or timber

- **Unusable:** Land that is known to be non-productive for agriculture purposes

Uncultivated Usable: This is land that was not used for reasons other than fallow. The reasons could be lack of inputs/money/rainfall/etc

Distance to fields (Q6.1):

-**fields** A field is a contiguous piece of land holding which the farmer considers as a single entity. The field may be divided into plots for growing different crops. A holding may consist of one or more fields in different localities.

Use of Communal Resources (Q6.2):

-**Communal resources** - refers to the place on which all individual households can have access to. It is not individually owned or controlled by one hh.

NOTE: The listed resources refers to communal resources and not those individually owned or part shared. The resource has to be freely accessible to the whole village

Overview to section 4

Section 4.0 - Preliminary note Land Access/ Ownership

Access/Ownership refers to the area utilized by the members of the household. This does not include communal land where the resources are shared between households. It does include official communal land that the hh has sole access to eg a plot for crop farming in the communal area.

Procedures for Questions

Section 4.0 - Land Ownership

1. Ask the respondent if he knows the total area of land the household has sole access to. If he knows make a note in the calculation space
2. Ask the respondent the area of the different land ownership categories the household has sole access to (Q4.1.1 to 4.1.7) and record in the appropriate spaces.
3. Add up the area of the different categories of land and compare it with the total area obtained in step 1 (if the respondent provided the information).
4. If the total area is different find out which one is correct and make amendments where appropriate.

Section 5.0 - Land Use

1. Ask the respondent the area of the different landuse categories the household has sole access to (Q5.1.1 to 5.1.12) and record in the appropriate spaces.
2. Add up the area of the different categories of land and compare it with the total area obtained in section 4.0. The total area should be the same.
3. If the total area is different find out which one is correct and make amendments where appropriate.

Section 6.2 Communal resources

Note: the code "Not available" means that the resource does not exist. The code "Not Used" means that the resource does exist but is not used by the hh.

7.0 ANNUAL CROP AND VEGETABLE PRODUCTION - SHORT RAINY SEASON

7.1.1 Did the hh **plant** any crops during the **Short Rainy** season? (Yes = 1, No=2) *If the response is 'NO' give main reason Then go to section 7.2*

Main Reason (Above) No rains.....1 Rains came too late2 Does not plant annual crops3
 No money 4 Don't get Vuli season ..5 Illness/social problems6
 Has irrigation & does not follow season (give annual production in Masika)7

7.1.2 For each crop planted during 2002/03 **Short Rainy** season provide the following information

Crop Name	Crop Code	Land clearing	Soil preparation	Planting		Inputs						Harvesting & Storage				Marketing					
				Planned area (acres)	Actual Planted area (acres)	% improved seed	Irrigation use	Fertiliser use	Herbicide use	Fungicide use	Pesticide use	How harvested	How threshed	Area Harvested (acres)	main product code	Quantity harvested (Kgs)	Quantity Stored (kgs)	Quantity sold (kgs)	Mostly sold to		
				(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
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.....																					
.....																					
.....																					
Total Planned/Planted						Total area harvested															

7.1.3 Main reason for difference between **Area Planned** and **Area Planted**

7.1.4 Main reason for difference between **Area Planted** and **Area Harvested**

<p>Land Clearing (Col 3)</p> <p>Mostly bush clearance ...1 Mostly hand slashing2 Mostly tractor slashing ...3 Mostly burning4 No land clearing5</p>	<p>Improved seed Use (Col 7)</p> <p>all Improved1 approx 3/4 improved2 approx 1/2 improved3 approx 1/4 improved4 less than 1/4 improved ..5 No improved seed used.6</p>	<p>Fertiliser codes (Col 9)</p> <p>Mostly Farm Yard Manure 1 Mostly Compost2 Mostly Inorganic fertiliser .3 No fertiliser applied4</p>	<p>Threshed/harvested (Col 13 & 14)</p> <p>By hand1 By draft animal2 By human powered tool3 By engine driven machine...4 Not applicable9</p>	<p>Mostly sold to (Col 20)</p> <p>Neighbour.....01 Local market/trade store02 Secondary Market...03 Tertiary Market04 Marketing Coop05 Farmer Association06 Largescale farm07 Trader at Farm08 Contract Partner ...09 Did not sell10 Other98</p>	<p>Reason for difference between area planned and planted (Q7.1.3)</p> <p>Drought1 Floods2 Access to land preparation tools (Draft animal/tractors).3 Credit4 Access to seeds/planting material.....5 Access to other inputs6 Other8 Not applicable9</p>	<p>Reason for difference between area planted and harvested (Q7.1.4)</p> <p>Drought1 Rain/flood damage2 Fire damage3 Pest damage4 Animal damage5 Theft6 Illness/social problems7 Other8 Not applicable9</p>
<p>Soil preparation Method (Col 4)</p> <p>Mostly tractor ploughing .1 Mostly Oxen ploughing ..2 Mostly Hand cultivation ..3</p>	<p>Irrigation Use (Col 8)</p> <p>Used on all crop1 Used on 3/4 of crop2 Used on 1/2 of crop3 Used on 1/4 of crop4 Used on less than 1/45 Not used6</p>	<p>Agrochemical use codes (Col 10,11 & 12)</p> <p>Used on all crop1 Used on 3/4 of crop2 Used on 1/2 of crop3 Used on 1/4 of crop4 Used on less than 1/45 Not used6</p>	<p>Main product (Col 16)</p> <p>Dry Grain1 Green cob/green pod.....2 Green leaves & Stem.....3 Straw, dry stems etc4 Root, tuber, etc5 Flower eg pyrethrum6 Fruit/bunch7 Other8 Not harvested yet9</p>			

Definitions and working page for page 4

Working table for the calculation of area occupied by annual crop in a mixture

Crop mixture 1	Crop Name	Total area of mix (acre)	Ground area/plant (ACRE)	Total no. of plants	Total ground area of plants (ACRES)
(a)	(b)	(c)	(d)	(e)	(f)
Permanent crop 1			0.00		0 .
Permanent crop 2			0.00		0 .
Permanent crop 3			0.00		0 .
Permanent crop 4			0.00		0 .
Total Area of permanent crops in mix					0 .
REMAINING AREA UNDER TEMPORARY CROPS					
				crop%	crop area
Temporary/permanent crop name 1					
Temporary/permanent crop name 2					
Temporary/permanent crop name 3					
Total area check			Crop total check		

Crop mixture 2	Crop Name	Total area of mix (acre)	Ground area/plant (ACRE)	Total no. of plants	Total ground area of plants (ACRES)
(a)	(b)	(c)	(d)	(e)	(f)
Permanent crop 1			0.00		0 .
Permanent crop 2			0.00		0 .
Permanent crop 3			0.00		0 .
Permanent crop 4			0.00		0 .
Total Area of permanent crops in mix					0 .
REMAINING AREA UNDER TEMPORARY CROPS					
				crop%	crop area
Temporary/permanent crop name 1					
Temporary/permanent crop name 2					
Temporary/permanent crop name 3					
Total area check			Crop total check		

Land Clearing: Refers to removing trees/bush/grass prior to ploughing
Soil Preparation: Refers to the seedbed preparation (ploughing, harrowing, etc)
Planned Area: Area in **Acres** the household planned to plant before the season started
Actual Planted Area: The area in **Acres** the household was able to plant.
Area Harvested: The area in **Acres** that produced a harvest. This is the same as the area planted minus the area that was destroyed by major flood/pest/ animal/etc damage.

Temporary/Annual Crop:
 Crops which are planted and harvested within a period of 12 months after which time the plants die. Most annual crops are planted and harvested on a seasonal basis.

Crop Codes (Cereals /tubers/roots):

Code	Crop
11	Maize
12	Paddy
13	Sorghum
14	Bulrush Millet
15	Finger Millet
16	Wheat
17	Barley
22	Sweet Potatos
23	Irish potatoes
24	Yams
25	Cocoyams
26	Onions
27	Ginger

Vegetable Codes:

Co	Crop
-de	
86	Cabbage
87	Tomatoes
88	Spinach
89	Carrot
90	Chillies
91	Amaranths
92	Pumpkins
93	Cucumber
94	Egg Plant
95	Water Mellon
96	Cauliflower

Crop Codes Legumes Oil & fruit:

Code	Crop
31	Beans
32	Cowpeas
33	Green gram
35	Chick peas
36	Bambara nuts
37	Field peas
41	Sunflower
42	Simsim
43	Groundnut
47	Soyabeans
48	Caster seed

Cash Crop Codes:

Code	Crop
50	Cotton
51	Tobacco
53	Pyrethrum
62	Jute
19	Seaweed

Instructions for calculating the area of mixed crops in a mixture.

- If the mixed crop is mixed annual only enter the total area of the field in the REMAINING AREA UNDER TEMPORARY CROPS. and goto step 1 of these instructions.
- If the mixed crop is mixed permanent and annual try to get the % occupied by the different crops and calculate the area of annual crops outlined in step 1. Otherwise use the number of trees method to calculate the area of annual crops in the mix, Step C
- Number of trees method to calculate annual crop areas in a peranent-annual crop mix/
 - list each of the permanent crops in column b and enter the ground area per acre for each permanent crop (from instructions for page 6) in column 'd'.
 - obtain the number of permanent trees in the mix from the respondent and enter the number in column 'e'.
 - calculate the area occupied by each crop by multiplying column 'd' with column 'e' and sum these to obtain the total area of permanent crops in the mix.
 - subtract the total area of permanent crops in the mix from the total area of mix and enter the result in the total area under temporary crops.
 - proceed to step 1 to calculate the area under each temporary crop.

- Enter the name of each annual crop in the mix & estimate the percentage of each crop.
- Using the percentages for each crop calculate the area of each crop from the REMAINING AREA UNDER TEMPORARY CROPS.
- After completing this exercise for all fields, sum the area of each crop in the mix plus any monocrops and enter totals in section 7.1 col 6.
- Obtain an estimate of the planned area for each crop and enter it in column 5
- If the area harvested is different to the area planted estimate the harvest area
- Once the quantity harvested is obtained calculate the Yield (Metric tonnes/acre) & compare the figure with the norms given in the crop codes box. If it is excessively different check the area and the amount harvested.

7.2 ANNUAL CROP AND VEGETABLE PRODUCTION - LONG RAINY SEASON

7.2.1 Did the hh **plant** any crops during the **LONG RAINY** season? (Yes=1 No=2)

If the response is 'NO' give main reason Then go to section 7.3

Main Reason (Above) No rains.....1 Rains came too late2 Does not plant annual crops3
No money 4 Illness/social problems ..5

7.2.2 For each crop planted during 2002/03 **Long Rainy** season provide the following information

Crop Name	Crop Code	Land Clearing	Soil preparation	Planting		Inputs						Harvesting & Storage				Marketing			
				Planned area (acres)	Actual Planted area (acres)	% improved seed	Irrigation use	Fertiliser use	Herbicide use	Fungicide use	Pesticide use	How harvested	How threshed	Area Harvested (acres)	main product code	Quantity harvested (Kgs)	Quantity Stored (Kgs)	Quantity sold (kgs)	mostly sold to
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
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Total Planned/Planted						Total area harvested													

7.2.3 Main reason for difference between **Area Planned** and **Area Planted**

7.2.4 Main reason for difference between **Area Planted** and **Area Harvested**

<p>Land Clearing (Col 3) Mostly bush clearance ...1 Mostly hand slashing2 Mostly tractor slashing ...3 Mostly burning4 No land clearing5</p>	<p>Improved seed Use (Col 7) all Improved1 approx 3/4 improved.....2 approx 1/2 improved.....3 approx 1/4 improved....4 less than 1/4 improved ..5 No improved seed used.6</p>	<p>Fertiliser codes (Col 9) Mostly Farm Yard Manure 1 Mostly Compost2 Mostly Inorganic fertiliser ..3 No fertiliser applied4</p>	<p>Threshed/harvested (Col13 & 14) By hand1 By draft animal2 By human powered tool.....3 By engine driven machine...4 Not applicable9</p>	<p>Mostly sold to (Col 20) Neighbour.....01 Local market/trade store02 Secondary Market...03 Tertiary Market04 Marketing Coop ...05 Farmer Association06 Largescale farm ...07 Trader at Farm08 Contract Partner ...09 Did not sell10 Other98</p>	<p>Reason for difference between area planned and planted (Q7.2.3) Drought1 Floods2 Access to land preparation tools (Draft animal/tractors).3 Credit4 Access to seeds/planting material.....t Access to other inputst Other8 Not applicable9</p>	<p>Reason for difference between area planted and harvested (Q7.2.4) Drought1 Rain/flood damage2 Fire damage3 Pest damage4 Animal damage5 Theft6 Illness/social problems7 Other8 Not applicable.....9</p>
<p>Soil preparation Method (Col 4) Mostly tractor ploughing .1 Mostly Oxen ploughing ..2 Mostly Hand cultivation ..3</p>	<p>Irrigation Use (Col 8) Used on all crop1 Used on 3/4 crop2 Used on 1/2 crop3 Used on 1/4 of crop.....4 Used on less than 1/4 ...5 Not used6</p>	<p>Agrochemical use codes (Col 10,11 &12) Used on all crop1 Used on 3/4 of crop2 Used on half of crop3 Used on 1/4 of crop4 Used on less than 1/45 Not used6</p>	<p>Main product (Col 16) Dry Grain1 Green cob/green pod.....2 Green leaves & Stem.....3 Straw, dry stems etc4 Root, tuber, etc5 Flower eg pyrethrum6 Fruit/bunch.....7 Others8 Not harvested yet9</p>			

Definitions and working page for page 5

Working table for the calculation of area occupied by annual crop in a mixture

Crop mixture 1	Crop Name	Total area of mix (acre)	Ground area/plant (ACRE)	Total no. of plants	Total ground area of plants (ACRES)
(a)	(b)	(c)	(d)	(e)	(f)
Permanent crop 1			0.00		0 .
Permanent crop 2			0.00		0 .
Permanent crop 3			0.00		0 .
Permanent crop 4			0.00		0 .
Total Area of permanent crops in mix					0 .
REMAINING AREA UNDER TEMPORARY CROPS					
				Temp crop%	Temp crop area
Permanent/Temporary crop name 1					
Permanent/Temporary crop name 2					
Permanent/Temporary crop name 3					
Total area check				Temporary crop total check	

Crop mixture 2	Crop Name	Total area of mix (acre)	Ground area/plant (ACRE)	Total no. of plants	Total ground area of plants (ACRES)
(a)	(b)	(c)	(d)	(e)	(f)
Permanent crop 1			0.00		0 .
Permanent crop 2			0.00		0 .
Permanent crop 3			0.00		0 .
Permanent crop 4			0.00		0 .
Total Area of permanent crops in mix					0 .
REMAINING AREA UNDER TEMPORARY CROPS					
				Temp crop%	Temp crop area
Temporary/permanent crop name 1					
Temporary/permanent crop name 2					
Temporary/permanent crop name 3					
Total area check				Temporary crop total check	

Land Clearing: Refers to removing trees/bush/grass prior to ploughing
Soil Preparation: Refers to the seedbed preparation (ploughing, harrowing, etc)
Planned Area: Area in **Acres** the household planned to plant before the season started
Actual Planted Area: The area in **Acres** the household was able to plant.
Area Harvested: The area in **Acres** that the household got most of its production from. This is the same as the area planted minus the area that was destroyed by major flood/pest/ animal/etc damage

Temporary/Annual Crop: Crops which are planted and harvested within a period of 12 months after which time the plants die. Most annual crops are planted and harvested on a seasonal basis.	Crop Codes (Cereals /tubers/roots): Code Crop 11 Maize 12 Paddy 13 Sorghum 14 Bulrush Millet 15 Finger Millet 16 Wheat 17 Barley 22 Sweet Potatos 23 Irish potatos 24 Yams 25 Cocoyams 26 Onions 27 Ginger	Vegetable Codes: Code Crop 27 Ginger 86 Cabbage 87 Tomatoes 88 Spinach 89 Carrot 90 Chillies 91 Amaranths 92 Pumpkins 93 Cucumber 94 Egg Plant 95 Water Mellon 96 Cauliflower 20 Garlic	Crop Codes Legumes Oil & fruit: Code Crop 31 Beans 32 Cowpeas 33 Green gram 35 Chick peas 36 Bambara nuts 37 Field peas 41 Sunflower 42 Simsim 43 Groundnut 47 Soyabeans 48 Caster seed
	Cash Crop Codes: Code Crop 50 Cotton 51 Tobacco 53 Pyrethrum 62 Jute 19 Seaweed		

Instructions for calculating the area of mixed crops in a mixture.

- If the mixed crop is mixed annual only enter the total area of the field in the REMAINING AREA UNDER TEMPORARY CROPS. and goto step 1 of these instructions.
- If the mixed crop is mixed permanent and annual try to get the % occupied by the different crops and calculate the area of annual crops outlined in step 1. Otherwise use the number of trees method to calculate the area of annual crops in the mix (Step C).
- Number of trees method to calculate annual crop areas in a permanent-annual crop mix
 - list each of the permanent crops in column b and enter the ground area per acre for each permanent crop (from instructions for page 6) in column 'd'.
 - obtain the number of permanent trees in the mix from the respondent and enter the number in column 'e'.
 - calculate the area occupied by each crop by multiplying column 'd' with column 'e' and sum these to obtain the total area of permanent crops in the mix.
 - subtract the total area of permanent crops in the mix from the total area of mix and enter the result in the total area under temporary crops.
 - proceed to step 1 to calculate the area under each temporary crop.

- Enter the name of each annual crop in the mix & estimate the percentage of each crop.
- Using the percentages for each crop calculate the area of each crop from the REMAINING AREA UNDER TEMPORARY CROPS.
- After completing this exercise for all fields, sum the area of each crop in the mix plus any monocrops and enter totals in section 7.1 col 6.
- Obtain an estimate of the planned area for each crop and enter it in column 5
- If the area harvested is different to the area planted estimate the harvest area
- Once the quantity harvested is obtained calculate the Yield (Metric tonnes/acre) & compare the figure with the norms given in the crop codes box. If it is excessively different check the area and the amount harvested.

7.3 PERMANENT/PERENNIAL CROPS AND FRUIT TREE PRODUCTION

7.3.1 Does your household have any permanent/perennial crops or fruit trees (Yes=1, No=2) 1

7.3.2 For each of the permanent crops and fruit trees owned by the household provide the following information

		Size of production unit				Inputs					Harvesting & Storage					Marketing		
Perm- anent Crop Name	Perman- ent crop/ fruit tree crop Code	MONOCROP		MIXED CROP		Irrig- -at -ion (6)	Fert- -ilis- -er use (7)	Herb- -ic -ide use (8)	Fun- -gic -ide use (9)	Pest -ici- -de use (10)	Area Harvested (acres) (11)	Number of mature plants (12)	main prod- uct code (13)	Quantity harvested (kgs) (14)	If no harvest give re- ason (15)	Quantity Stored (Kgs) (16)	Quantity sold (kgs) (17)	mostly sold to (18)
		Area of Plants/ trees/Bushes in MONO CROP (acres) (3)	Area covered by Permanent Crop in a MIXED CROP (acre) (4)	Number of permanent Plants/trees in a MIXED CROP (5)														
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<p><u>Irrigation Use (Col 6)</u></p> <p>Used on all crop1 Used on most crop2 Used on half crop3 Used on small amount of crop.4 Not used on crop5</p>	<p><u>Fertiliser codes (Col 7)</u></p> <p>Mostly Farm Yard Manure.....1 Mostly Compost2 Mostly Inorganic fertiliser3 No fertiliser applied4</p>	<p><u>Agrochemical use codes (Col 8, 9 & 10)</u></p> <p>Used on all crop1 Used on 3/4 of crop2 Used on 1/2 of crop3 Used on 1/4 of crop4 less than 1/4 of crop5 Not used6</p>	<p><u>Main product (Col 13)</u></p> <p>Dry Grain.....1 Green cob/green pod..2 Green leaves & Stem..3 Straw, dry stems etc ...4 Root, tuber, etc5 Flower6 Fruit/bunch.....7 Other8 Not harvested yet9</p>	<p><u>Main Reason for no harvest(Col 15)</u></p> <p>Crop not harvested yet1 Drought2 Rain/flood damage3 Fire damage4 Pest damage5 Animal damage6 Theft7 Other8 Not applicable9</p>	<p><u>Mostly sold to (Col 18)</u></p> <p>Neighbour.....01 Local market/trade store....02 Secondary Market03 Tertiary Market04 Marketing Coop05 Farmer Association06 Largescale farm07 Trader at farm08 Contract Partner09 Did not sell10 Other98</p>
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Definitions and working page for page 6

Permanent Crop:

Permanent crops: are sown or planted once and then , they occupy the land for some years and need not to be replanted after each annual harvest. Permanent crops are mainly trees (e.g., apples) but also bushes and shrubs (e.g., berries), palms (e.g., dates), vines (e.g., grapes), herbaceous stems (e.g., bananas) and stemless plants (e.g., pineapples).

Total number of plants:

This includes both mature harvestable plants and immature non harvestable plants.

Number of mature plants: This is the number of plants which bared harvest.

Instructions for Permanent crop mono stands and mixtures

- A.** For fields that are **monocrop permanent**, **ONLY** enter the **area of plants in column 3**.
- B.** For fields that are **mixed permanent** calculate the area of each crop based on the % **occupied by each crop method** (NOT using the number of trees method) and **ONLY** enter the area in **column 4**
- C.** For fields that are **mixed permanent/annual** either:
- **ONLY** enter the **area in column 4** if the area of the permanent crop was based on the % **occupied by each crop method**
- OR**
- **ONLY** enter the **number of trees in column 5** if the number of permanent crop plants was provided

Permanent crops (oils):

Code	Crop	Ground area/plant
44	Palm Oil	0.00049
45	Coconut	0.00037
46	Cashewnut	0.00062

Permanent (Cash crops)

Code	Crop	Ground area/plant
53	Sisal	0.00012
54	Coffee	0.00049
55	Tea	0.00037
56	Cocoa	0.00049
57	Rubber	0.00099
58	Wattle	0.00099
59	Kapok	0.00124
60	Sugar Cane	0.00012
61	Cardamom	0.00049
63	Tamarin	0.00099
64	Cinamon	0.00124
65	Nutmeg	0.00099
66	Clove	0.00074
18	Black Pepper	0.00037
34	Pigeon pea	0.00025
21	Cassava	0.00019
75	Pineapple	0.00006

Permanent Crops:

Code	Crop	Ground area/plant
70	Passion Fruit	0.00074
71	Banana	0.00037
72	Avocado	0.00099
73	Mango	0.00099
74	Papaw	0.00037
76	Orange	0.00074
77	Grapefruit	0.00074
78	Grapes	0.00012
79	Mandarin	0.00074
80	Guava	0.00074
81	Plums	0.00074
82	Apples	0.00074
83	Pears	0.00074
84	Peaches	0.00074
85	Lime/lemon	0.00074
68	Pomelo	0.00099
69	Jack fruit	0.00074
97	Durian	0.00074
98	Bilimbi	0.00074
99	Rambutan	0.00074
67	Bread fruit	0.00099
38	Malay apple	0.00074
39	Star fruit	0.00074

Working Area/calculation space

7.4 Main use of Secondary Products

7.5 Did you use **Secondary Products** from any of your crops during the 2002/03 year. (Yes=1, No=2)

If the response is 'NO' go to section 8.0

7.6 List the **main crops** with **secondary products** and provide the following details:

S/N	Crop name	Crop Code	Secondary product	Prod code	Used for	Unit	Total no of Units	No of units sold	Total value of sold units (Tsh.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7.6.1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7.6.2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7.6.3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7.6.4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7.6.5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7.6.6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Main product (Col 4)

Green leaves & Stem...1 Flower ...4
 Straw, dry stems etc ...2 Fruit5
 Root, tuber, etc3 Other8

Mainly used for (Col 5)

Feeding to livestock ..1 Consumed by hh4
 Building material2 Sold5
 Fuel for cooking3 Did not use.....6

Unit (Col 6)

Loose Bundle/bunch1 kg5
 Compressed bunch/Bail...2 Stems6
 Tin3 Sack7
 Bucket4 Other8

8.0 AGROPROCESSING AND BY-PRODUCTS

8.1 Did the household **process** any of the products harvested on the farm during 2002/03 (Yes=1, No=2)

If the response is 'NO' go to section 9.0

8.2 List the **main crops processed** and provide the following details:

S/N	Crop name	Crop Code	Proc-ess-ed	Main Prod-uct code	Used for	Unit	Quantity of main product	Quantity Sold	Where sold	By-Prod-uct code	Used for	Unit	Quantity of by-product	Quantity Sold
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
8.2.1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8.2.2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8.2.3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8.2.4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8.2.5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8.2.6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Processed (Col 3)

On farm by hand.....1
 On farm by machine.....2
 By neighbours machine...3
 By farmers association ...4
 By Cooperative union5
 By trader6
 On Large scale farm7
 By factory9
 Other8

Main product code (Col 4)

Flour/meal.....1
 Grain.....2
 Oil3
 Juice.....4
 Fiber.....5
 Pulp6
 Sheet7
 Other8

Used for (Col 5 & 11)

Household/human consumption ..1
 Fuel for cooking2
 Sale3
 Animal consumption.....4
 Did not use5
 Other8

Where sold (Col 9)

Neighbour.....1
 Local market/trade store2
 Secondary Market3
 Marketing Coop4
 Farmer Association5
 Largescale farm6
 Trader at farm7
 Did not sell9
 Other8

By-product code (Col 10)

Bran01
 Cake02
 Husk03
 Juice04
 Fiber05
 Pulp06
 Oil07
 Shell08
 Other98

Unit (Col 6 & 12)

Loose bundle/bunch1
 Compressed bunch/bail...2
 Tin3
 Bucket4
 kg5
 litre6
 Other8

Definition and working page for page 7					
Temporary/annual crop codes for section 7.4 col 2					General Definition for Section 7.4
Crop Code	Crop Name	Secondary Product Question 7.4	Agroprocessing & bi-products		
			Main Products (Section 8.0)	Bi-product (Sect 8.0)	
			1	2	
11	Maize	Stems/straw	Flour	Bran	
12	Paddy	Stems/straw	polished rice grain	husk	
13	Sorghum	Stems/straw	flour		
14	Bulrush Millet	Stems/straw	flour		
15	Finger Millet	Stems/straw	flour		
16	Wheat	Stems/straw	flour	Bran	
17	Barley	Stems/straw	flour	Bran	
21	Cassava	Leaves/stems	flour		
22	Sweet Potatoes	Leaves			
23	Irish potatoes				
24	Yams				
25	Cocoyams				
26	Onions				
27	Ginger				
31	Beans	straw/stems			
32	Cowpeas	straw			
33	Green gram	straw			
34	Pigeon peas	stems			
35	Chick peas	straw			
36	Bambara nuts	straw/stems	oil	cake	
41	Sunflower	Stems	oil	Cake	
42	Simsim	straw	oil	Cake	
43	Groundnut	straw	oil	Cake	
47	Soya beans	straw	oil	Cake	
48	Caster seed	straw	oil	Cake	
75	Pineapple		Juice		
50	Cotton	straw	fibre/seed	oil	cake
51	Tobacco				
53	Pyrethrum	straw	insecticide		
62	Jute		fibre		
86	Cabbage				
87	Tomatoes				
88	Spinach				
89	Carrot				
90	Chillies		dried powder		
91	Amaranths				
92	Pumpkins	leaves			
93	Cucumber				
94	Egg Plant				
95	Water Mellon				
96	Cauliflower				
44	Oil Palm	leaves	oil outer	oil inner	cake
45	Coconut	leaves/husk	milk		
46	Cashewnut	Fruit	fruit juice	shell liquid	
52	Sisal	stems	fibre	oil	
54	Coffee	stems	beans	husks	
55	Tea	stems			
56	Cocoa	stems	cocoa	cocoa butter	
57	Rubber	stems			
58	Wattle	stems			
59	Kapok	stems			
60	Sugar Cane		sugar/juice	molasses	ethanol
61	Cardamom				
71	Banana	leaves/stems	juice		
72	Avocado	stems			
73	Mango	stems	Juice		
74	Paw paw		Juice		
76	Orange	stems	Juice		
77	Grape fruit	stems	Juice		
78	Grapes	stems	Juice		
79	Mandarin	stems	Juice		
80	Guava	stems			
81	Plums	stems			
82	Apples	stems			
83	Pears	stems			
84	Pitches	stems			
85	Lime/Lemon	stems	juice		

General Definition for Section 7.4

Secondary Products: Second most important product from a crop. Eg a household may consider the grain from maize as the primary product and the stems/straw as the secondary product.

Note: Secondary products are NOT the same as bi-products. By-products are the result of a processing activity and are dealt with in section 8.0.

Procedures for Questions

Q 7.6 Details of Secondary Products:

- From the list of crops in Q 7.1.2, 7.2.2 & 7.3.2, ask the respondent if the hh used any secondary products. List the crop names and codes in column 1 and 2 for those crops that the hh used secondary products.
- For the listed crops give details of the secondary products used.
- If no units were sold, enter "0" in columns 8 & 9.

Q 8.0 Agroprocessing & bi-products:

- From the list of crops in Q 7.1.2, 7.2.2 & 7.3.2, ask the respondent if the hh processed any of these crops during the 2002/03 agriculture year. List the crop names and codes in column 1 and 2 for those crops that were processed by the hh.
- For the listed crops give details of the secondary crops used.
- If no main product or bi-product was sold enter "0" in columns 8 & 14.
- If no bi-product was produced enter "0" in columns 10, 11, 12, 13 & 14.

Question Specific Definitions

Agroprocessing and bi-products (Q 8.2)
(Note: Agroprocessing refers to the processing of crops for hh utilisation and for sale)

Main Product (Col 5):

Main Product after processing. Eg for Paddy it may be the polished grain. For Maize it may be flour.

Bi-Product code (Col 11): is the secondary residue after processing, eg for rice it may be the husk. for maize it may be the bran.

Mainly used for (Col 5 & 11):

- Consumed by household can mean eaten or utilised in another way (eg by animals) by the hh.

9.0 CROP STORAGE							
9.1	Did the household store any crops during the 2002/03 agriculture year? (Yes =1, No=2) <input style="float:right;" type="checkbox"/>						
<i>If the response is 'NO' go to section 10.0</i>							
9.2 For each of the listed crops provide the following details on storage							
S/N	Crop Name	Stor- ed Y=1 No=2	Current Quantity Stored (kg)	Method of Storage	Normal duration of storage	Main pur- pose	Estimate
							Storage loss
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
9.2.1	Maize	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2.2	Paddy	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2.3	Sorghum/Millet	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2.4	Beans, peas, etc	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2.5	Wheat	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2.6	Coffee	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2.7	Cashewnut	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2.8	Tobacco	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2.9	Cotton	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2.10	Groundnuts/bambara	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Main method of Storage (Col 4)

In locally made traditional structure..1
 In Improved locally made structure .2
 In modern store3
 In Sacks/open drum.....4
 In airtight drum5
 Unprotected pile6
 Other8

Duration of Storage (Col 5)

Less than 3 months1
 Between 3 and 6 months2
 Over 6 months3

Main purpose of storage (Col 6)

Food for the household1
 To sell for higher price2
 seed for planting.....3
 Other8

Storage loss (Col 67)

Little or no loss1
 Up to 1/4 loss2
 Between 1/4and 1/2 loss ..3
 Over 1/2 loss4

10.0 MARKETING							
10.1	Did the household sell any crops from the 2002/03 agriculture year? (Yes=1, No=2) <input style="float:right;" type="checkbox"/>						
<i>(If the response is 'YES' or 'NO' go to section 10.2)</i>							
10.2 For each of the following crops what was the main marketing problem faced by the household during 02/03							
	Crop	Main problem		Crop	Main problem	10.3 From the list of marketing problems below, for all produce rank the five most important problems	
	(1)	(2)		(1)	(2)		
10.2.1	Maize	<input type="checkbox"/>		10.2.9	Vegetables	<input type="checkbox"/>	
10.2.2	Rice	<input type="checkbox"/>		10.2.10	Tree Fruits	<input type="checkbox"/>	
10.2.3	Sorghum/millet	<input type="checkbox"/>		10.2.11	Cashewnut	<input type="checkbox"/>	10.3.1
10.2.4	Wheat	<input type="checkbox"/>		10.2.12	Cotton	<input type="checkbox"/>	10.3.2
10.2.5	Beans, peas etc	<input type="checkbox"/>		10.2.13	Tobacco	<input type="checkbox"/>	10.3.3
10.2.6	Cassava	<input type="checkbox"/>		10.2.14	Groundnuts/bamabara	<input type="checkbox"/>	10.3.4
10.2.7	Bananas	<input type="checkbox"/>		10.2.15	Trees/timber/poles	<input type="checkbox"/>	10.3.5
10.2.8	Coffee	<input type="checkbox"/>		10.2.16	Fish	<input type="checkbox"/>	

Market problems (Q10.2 & 10.3 (Col 2))

Open market price too low01 Market too far05 Government Regulatory board problems...09
 No transport02 Farmer association problems06 Lack of market Information10
 Transport cost too high03 Cooperative Problems07 Other (specify)98
 No buyer04 Trade Union problems08 Not Applicable99

10.4	What was the main reason for not selling crops during 2002/03 year						<input type="checkbox"/>
------	---	--	--	--	--	--	--------------------------

Reason for not selling crops (Q10.4)

Price too low1 Farmer association problems4 Government regulatory board problems7
 Production insufficient to sell.....2 Cooperative Problems.....5 Other (specify)8
 Market too far3 Trade Union problems6 Not Applicable9

Definition and working page for page 8**Question Specific definitions (Section 9.0)****Crop Storage, Section 9****Method of Storage (column 4)**

- **Locally made structure:** The structures that have been inherited from their fore fathers
- **Improved locally made structure:** Traditional structures that have been improved using modern technology.
- **Normal duration of storage:** Often there are stored stocks from different seasons and different years. The normal duration refers to the number of months that the most of the crop is stored for.

Marketing problems Q 10.2 and 10.3 col 2:

- **Farmer Association:** A village or community based group of farmers who have formed an organisation to purchase inputs/sell/store their products in order to achieve a better price for their products.
- **Cooperative Union:** Large inter-village /community organisation set up on a district/regional or national basis for providing inputs, marketing and storing farmers products.
- **Government Regulatory board:** Government control body for setting prices and controlling quality of certain agriculture commodities.

Procedures for Questions**Q 9.2 Details of Crop Storage:**

1. For the crops listed indicate if the household stored any during 2002/03 in column 2.
2. Check that the crops correspond to the crop lists in Q 7.1.2, 7.2.2 & 7.3.2. If there is a difference inquire on the reason why. It is possible that a crop was missed during the enumeration of these questions and if so make necessary amendments
3. For the listed crops give details of storage.

Q 10.2 Details on Crop Marketing:

1. For each of the crops listed indicate the main problems in marketing during 2002/03 in column 2.
2. Check if the crops correspond to the crop lists list in Q 7.1.2, 7.2.2 & 7.3.2. If there is a difference inquire on the reason why. It is possible that a crop was missed during the enumeration of these questions and if so make necessary amendments

Q 10.3 Ranking of market problems:

Rank in order of importance the 5 most important marketing problems from the codes in the Market Problems code box.

Working Area/calculation space

11.0 ON-FARM INVESTMENT					
11.1 Does the household practice irrigation (Yes=1, No=2) <input type="checkbox"/>					
<i>If the response is 'NO' go to section 11.3</i>					
S/N	Source of Irrigation water	Method of obtaining water	Method of application	Irrigatable area (acres)	Area of irrigated land this year (acres)
	(1)	(2)	(3)	(4)	(5)
11.1.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>
Source of irrigation water (Col 1) River1 Borehole5 Lake2 Canal6 Dam3 Tap Water7 Well4			Method of obtaining water (Col 2) Gravity1 motor pump4 Hand bucket2 Other8 Hand pump3		Method of application (Col 3) Flood1 Sprinkler2 water hose3 Bucket/watering can4

11.2 Does the household have any erosion control/water harvesting facilities on their land (Yes=1, No=2) <input type="checkbox"/>						
<i>If the response is 'NO' go to section 12.0</i>						
S/N	Type of erosion control/water harvesting structure	Number of structures	Year of construction	Type of erosion control/water harvesting structure	Number of structures	Year of construction
	(1)	(2)	(3)	(1)	(2)	(3)
11.2.1	Terraces	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	11.2.5	Tree belts	<input type="text"/> <input type="text"/>
11.2.2	Erosion control bunds	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	11.2.6	Water harvesting bunds	<input type="text"/> <input type="text"/>
11.2.3	Gabions/Sandbags	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	11.2.7	Drainage ditches	<input type="text"/> <input type="text"/>
11.2.4	Vetiver Grass	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	11.2.8	Dam	<input type="text"/> <input type="text"/>

12.0 ACCESS TO FARM INPUTS AND IMPLEMENTS									
12.1 Give details of farm inputs used during the 2002/03 agriculture year									
S/N	Input name	Used Yes=1 No=2	Source	Distance to Source	Source of Finance	Reason for not using	Quality of Input	Plan to use next year Yes =1, No=2	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
12.1.1	Chemical Fertiliser	<input type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.1.2	Farm Yard Manure	<input type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.1.3	Compost	<input type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.1.4	Pesticide/fungicide	<input type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.1.5	Herbicide	<input type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.1.6	Improved Seeds	<input type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.1.7	Other	<input type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Source (Col 3) Cooperative01 Local farmers group02 Local market/Trade Store ...03 Secondary Market04 Development project05 Crop buyers06 Large scale farm07 Locally produced by hh08 Neighbour09 Other (specify)98 Not applicable99		Distance to source (Col 4) Less than 1 Km1 Between 1 and 3km2 between 3 and 10 km...3 Between 10 and 20 km ...4 20km and above5 not applicable9		Source of finance (Col 5) Sale of farm products .1 Other income generating activities ...2 Remittances3 Bank Loan/Credit4 produced on farm5 Other8 Not applicable9		Reason for not using (Col 6) Not available1 Price too high2 No money to buy3 Too much labour required .4 Do not know how to use.....5 Input is of no use6 Locally produced by hh7 Other8 Not applicable9		Quality of input (Col 7) Excellent1 Good2 Average3 Poor4 Does not work .5 not applicable...9	

Definition and working page for page 9

Overview of Investment activities (Section 11.0)

Investment activities:

Investment activities refer to medium to long term farm development structures and projects. This can be Irrigation structures, erosion and water harvesting structures or other permanent or semi-permanent investment made on the land that the household owns.

Question Specific Definitions (Q 11.1)

Source of irrigation Water (Col 1): The main source of water from which water is obtained for irrigation.

Method of obtaining water (Col 2): The mechanism by which the water is extracted from the source,

Application Method (Col 3): How the water is applied on the field.
 - Flood - is the application of water down the slope of the land by means of gravity
 - Sprinkler - is the application of pressurised water through pipes. The water passes through a device which sprays the water onto the crop from above.

Irrigatable Area (Col 4): The area the irrigation system is designed to cover in acres.

Area of irrigated land this year (Col 5): Area of land under irrigation during the 2002/03 agric year. This is the physical area and NOT the cumulative area of 2 or more croppings.

Q 11.1 Irrigation

1. If the hh practices irrigation give details on the main source, main method of obtaining and applying water.
2. Cross check column 8, Q 7.1.2, 7.2.2 & 7.3.2 to check if irrigation was used on any crops.

Question Specific Definitions (Q 11.3)

Erosion control/water harvesting structure (Col 1)

Terraces: Are structures constructed on the side of a hill to provide a level ground to plant crops. They are often used to trap water for paddy/lowland rice production.

Erosion Control Bunds: These are banks of earth/stones built perpendicular to the slope to slow down water and prevent erosion. They are different to Terraces in that the soil behind the banks are not level.

Gabions: A gabion is a wire mesh box filled with rocks/stones and used to control or prevent gully erosion

Sandbags Used to prevent or control gully erosion

Tree belts/Wind breaks: A band of trees planted perpendicular to the prevailing wind whose main purpose is to slow down wind speed

Water Harvesting bunds: A bank of earth constructed horizontal to the slope of the land to trap water. They are usually banana shaped.

Dam: A bank of earth/material which traps river water to form a catchment of water behind it.

Q 11.3 erosion control/water harvesting

1. Number of structures refers to the number of working/maintained structures and does not include derelict or irreparable structures.
2. Year of construction refers to the year that the structures were first constructed. It is not the year that the structures were last maintained.

Farm Inputs (Q 12.1.1 to 12.1.7)

Farm yard Manure: An organic fertiliser made on farm composed of animal dung.

Compost: An organic fertiliser made on farm from decomposed plant material

Pesticide: Chemical used to either protect the plant from or kill insects, birds, molluscs, mites, etc attacking the plant

Fungicide: is a chemical that s used to protect the plant from or control a fungal disease.

Herbicide: A chemical used to control weeds.

Q 12.0 Farm Inputs

1. Indicate in column 1 whether each of the inputs are used or not.
2. Complete cols 3, 4, 6, and 7 for inputs that are used and place '9' in column 5 (for not applicable).
3. Complete cols 5 & 7 for inputs not used.

NOTE: Cross check column 6, 7, 8 & 9 , Q 7.1.2, 7.2.2 & 7.3.2 to check what inputs were used.

12.2 Give details of farm implements and assets used and owned by the household during 2002/03 agriculture year								
S/N	Equipment/Asset Name	Number		Used in 2002/03 Yes 1, No=2	Source of Equip-ment	Source of Fin-ance	Reason for not using	Plan to use next year Yes=1, No=2
		Owned	rent -ed					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
12.2.1	Hand Hoe	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12.2.2	Hand Powered Sprayer	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12.2.3	Oxen	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12.2.4	Ox Plough	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12.2.5	Ox Seed Planter	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12.2.6	Ox Cart	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12.2.7	Tractor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12.2.8	Tractor Plough	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12.2.9	Tractor Harrow	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12.2.10	Shellers/threshers	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Source of equipment (Col 5)		Source of finance (Col 6)		Reason for not using (Col 7)				
Neighbour.....1 Development project5		Sale of farm products1		Not available1				
Cooperative2 Government6		Other income generating activities .2		Price too high2				
Local farmers association.....3 Large scale farm7		Remittances3		No money to buy/rent.....3				
market/Trade store4 Other (specify)8		Bank Loan4		Too much labour required...4				
		Credit5		Equipment/Asset of no use ...5				
		Other8		Other8				
		Not applicable9		Not applicable9				
13.0 USE OF CREDIT FOR AGRICULTURE PURPOSES								
13.1	During the year 2002/03 did any of the hh members borrow money for agriculture (Yes = 1, No = 2) <i>(if the response is 'NO' go to section 13.3)</i>							<input type="text"/>
13.2	Give details of the credit obtained during the agricultural year 2002/03 <i>(if the credit was provided in kind , for example by the provision of inputs, then estimate the value in 13.2.9)</i>							
	use codes to indicate source	Source "a"		Source "b"		Source "c"		
	Provided to Male = 1, Female 2	<input type="text"/>		<input type="text"/>		<input type="text"/>		
		tick the boxes below to indicate the use of the credit		tick the boxes below to indicate the use of the credit		tick the boxes below to indicate the use of credit		
13.2.1	Labour	<input type="text"/>		<input type="text"/>		<input type="text"/>		
13.2.2	Seeds	<input type="text"/>		<input type="text"/>		<input type="text"/>		
13.2.3	Fertilisers	<input type="text"/>		<input type="text"/>		<input type="text"/>		
13.2.4	Agrochemicals	<input type="text"/>		<input type="text"/>		<input type="text"/>		
13.2.5	Tools/equipment	<input type="text"/>		<input type="text"/>		<input type="text"/>		
13.2.6	Irrigation structures	<input type="text"/>		<input type="text"/>		<input type="text"/>		
13.2.7	Livestock	<input type="text"/>		<input type="text"/>		<input type="text"/>		
13.2.8	Other	<input type="text"/>		<input type="text"/>		<input type="text"/>		
13.2.9	Value of Credit (Tsh.)	<input type="text"/>		<input type="text"/>		<input type="text"/>		
13.2.10	Value of repayment (Tsh.)	<input type="text"/>		<input type="text"/>		<input type="text"/>		
13.2.11	Period of repayment (months)	<input type="text"/>		<input type="text"/>		<input type="text"/>		
Source of credit (Q 13.2-a, b and c) Family, friend or relative...1 Commercial Bank.....2 Cooperative3 Savings & credit Soc4 Trader/trade store5 Private individual6 Religious Organisation/NGO/Project ...7 Other (Specify).....8								
13.3	If the answer to question 13.1 above is 'NO' what is the reason for not using Credit?							<input type="text"/>
Reason for not using credit (Q13.3) Not needed ...1 Not available ...2 Did not want to go into debt....3 Interest rate/cost too high.....4 Did not know how to get credit....5 Difficult bureaucratic procedure ...6 Credit granted too late ...7 Other (specify) ...8 Dont know about credit9								

Definition and working page for page 10

Question Specific Definitions (Q 12.2)

Farm Implements (Col 1):

Hand powered Sprayer: Knapsack or bicycle pump sprayer

Reason for not using (Col 6): Be careful about using "too much labour required" as this code generally refers to hand hoes only. The codes for this should "**NOT**" be read out to the farmer as a prompt.

Note: If remittance is given as the main source of finance check for a response to remittances in **question 2.2.5**

Question Specific Definitions (Q 13.0)

Section 13.0 Credit for Agriculture Purposes

Credit is defined as finance in the form of cash or in-kind contributions (eg direct provision of inputs, machinery, livestock or other material) for the purpose of crop and livestock production whereby the value of the credit must be paid back to the borrower. The value of repayment may either be with interest or interest free.

Credit may be paid back in the form of cash or agriculture produce.

Section 13.0 Credit for Agriculture Purposes

Value of credit: is the amount in cash received from the borrower. If the credit was paid in-kind, estimate the value of this.

Value of repayment: This is the amount to be repaid to the borrower and includes the principal amount (value of credit) plus any interest repayment. If the credit is paid back in agriculture produce, then the cash value of this must be estimated.

Period of repayment: This is the time in **months** the borrower has given for full repayment.

Procedures for questions

Q 12.0 Farm Inputs

1. Indicate in column 2 and 3 whether each of the implements were used or not.
2. Complete cols 4, 5, 6, and 8 for inputs that are used and place '9' in column 7 (for not applicable).
3. Complete cols 7 & 8 for inputs not used.

Section 13.2 Source of agriculture credit

If the farmer obtained credit from more than one source then use the columns "a", "b" and "c" for the different sources of credit. Start with the main source of credit in column "a".

NOTE: Check for use of inputs in column 7, 8 & 9 of questions 7.1.2, 7.2.2 & 7.3.2.

Working Area/calculation space

14.0 TREE FARMING/AGROFORESTRY

14.1 Did your household have any **Planted Trees** on your land during 2002/03 agric year? (Yes =1, No=2)
If the response is 'NO' go to section 14.3

14.2 Give details of the **planted trees** you have on your land.

S/N	Tree Code	Number of trees	Where planted	Main Use	Secondary Use	Number of Plank trees Sold	Number of Pole trees Sold	hh utilised		Total Value (Tsh.)
								Poles	Timber	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
14.2.1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
14.2.2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
14.2.3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
14.2.4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Where Planted (Col 3)
 Mostly on field/plot boundaries.1
 Mostly scattered in fields2
 Mostly in plantation/coppice ...3

Use (Col 4 & 5)
 Planks/Timber.....1 Shade5
 Poles2 Medicinal.....6
 Charcoal3 Other8
 Fuel wood4

14.3 Does your village have a **Community tree planting scheme** (Yes=1, No=2)
If the response is 'NO' go to section 15.0

14.4 Household involvement in **community tree planting scheme**

S/N	Distance to community planted forest (Km)	hh Involvement	Main purpose	Main use during 2002/03
	(1)	(2)	(3)	(4)
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

HH involvement (Col 2)
 Only planting1
 Only protection and thinning.....2
 Only cutting3
 Most or all activities.....4

Main Purpose (Col 3)
 Erosion control.....1 Environment rehaiblitation ...4
 Production of poles2 Restoration of wildlife5
 production of firewood..3 Other (specify)8

Main Use during 02/03(Col 4)
 Poles1 Not ready to use5
 Timber logs2 Not allowed to use ...6
 Charcoal3 Other (specify)8
 Firewood4

15.0 CROP EXTENSION SERVICES

15.1 Did your household receive **extension advice for crop production** during 2002/03 (Yes=1,No=2)
If the response is 'NO' go to section 16.0

S/N	Extension Provider	Source of extension (Y=1,N=2)	If you pay for extension, what is the cost/yr	Contact farmer /group member (Yes=1,No=2)	No. of visits by extension agency per year	No. of message adopted in the last 3 years	Quality of Service
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
15.1.1	Government extension	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
15.1.2	NGO/development project	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
15.1.3	Cooperative	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
15.1.4	Large Scale farmer	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
15.1.5	Other.....	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Quality of service (Col 7)
 Very good1 good2 Average.....3 Poor.....4 No Good5

Definition and working page for page 11

General Definitions for section 14.0

Tree Farming/Agroforestry

This section refers to trees **planted** for wood (firewood, poles, planks, carving, charcoal, medicinal, etc, but **NOT** fruit trees). It does **not** include naturally growing trees on the farm (unless special care has been given to promote their establishment) or trees growing naturally on the communal areas.

Tree farming is the planting of trees on an area of land for which the main purpose is the production and regeneration of trees for wood on that land.

Agroforestry: is the planting of trees on land for the purpose of complementing other farming activities like crop and animal production. For the purpose of this questionnaire Agroforestry trees are trees planted on boundaries and scattered throughout fields. The main productive unit in this case is Crops and Livestock.

Section 14.2 Details of planted trees

1. Enter the tree codes of the main species grown by the hh
2. If no planks or poles are sold enter a "0" in columns 8, & 9.
3. Total value includes both value of hh utilised trees and sold trees.
4. If no trees were utilised by the hh or sold enter "0" in column 10

Question Specific Definitions

Tree farming (Section 14.0)

Pole trees (Col 6): These are young trees which have a maximum diameter of 6 inches at the bottom and are often used for house construction. They are often the thinning harvest after 3 - 5 years.

Plank trees (Col 7): Trees for sawing into timber planks.

Animal shade: Trees grown for the purpose of providing shade to animals.

Community tree planting scheme (Section 14.3)

Community Forest: A forest planted on the communal land which is planted, replanted or spot planted by the members of the village.

Crop Extension Services (Section 15.1)

Contact Farmer: A farmer who is used by the extension agent as a focal point to demonstrate new interventions. The contact farmer then passes on the message to other farmers

Group member: Member of a group under which the contact farmer leads

Adoption: This is the uptake of an intervention for 2 or more years

Section 15.1 Crop Extension Services

1. For each of the extension providers ask if the hh received extension during 2002/2003 agriculture year and indicate in column 2.
2. For each of the providers complete the rest of the columns

Tree Name Guide Col 1

Code	Local Name	Botanical Name	English Name
01		<i>Senna siamea</i>	Cassod tree
02	Msongoma	<i>Gravellia</i>	Silver oak
03	Mbarika	<i>Azelia quanzensis</i>	Pod mahogany
04	Mkeshia	<i>Acacia spp</i>	Umbrella thorn
05	Msindano	<i>Pinus spp</i>	Pine
06	Mkaratusi	<i>Eucalyptus spp</i>	Red River Gum
07		<i>Cyprus spp</i>	Cyprus tree
08	Mtndoo	<i>Calophyllum inophyllum</i>	
09	Mvule	<i>Melicia excelsa</i>	Iroko
10	Mvinji	<i>Casurina equisetifolia</i>	Whistling oak
11	Msaji	<i>Tectona grandis</i>	Teak
12	Mkungu wa kienyeji	<i>Terminalia catapa</i>	Sea almond
13	Mkungu india	<i>Terminilia ivorensis</i>	Black afara
14	Muhumula	<i>Maesopsis berchemoides</i>	
15			

Code	Local Name	Botanical Name	English Name
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

15.2 Crop Extension Messages									
S/N	Extension Message	Received Advice Yes=1 No=2	Adopted Yes=1 No=2	Source of Crop Extension	S/N	Extension Message	Received Advice Yes=1 No=2	Adopted Yes=1 No=2	Source of Crop Extension
	(1)	(2)	(3)	(4)		(1)	(2)	(3)	(4)
15.2.1	Spacing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.2.9	Crop Storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.2.2	Use of agrochemicals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.2.10	Vermin control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.2.3	Erosion control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.2.11	Agro-processing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.2.4	Organic fertiliser use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.2.12	Agro-forestry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.2.5	Inorganic fertiliser use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.2.13	Bee Keeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.2.6	Use of improved seed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.2.14	Fish Farming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.2.7	Mechanisation/LST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.2.15	Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.2.8	Irrigation Technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Source of extension (Col 4)
 Government1 NGO/Dev project ..2 Cooperative ...3 Large scale farmer4 Other (Specify) ...8 Not applicable9

16.0 LIVELIHOOD CONSTRAINTS					
From the list of constraints on the right select:				List of constraints	
16.1	the 5 most important problems	16.2	the 5 least important problems		
	Order of most importance	Constraint	Order of least importance	Constraint	
	(1)	(2)	(1)	(2)	
16.1.1	most important	<input type="checkbox"/>	16.2.1	Least important	<input type="checkbox"/>
16.1.2	2nd most important	<input type="checkbox"/>	16.2.2	2nd least important	<input type="checkbox"/>
16.1.3	3rd most important	<input type="checkbox"/>	16.2.3	3rd least important	<input type="checkbox"/>
16.1.4	4th most important	<input type="checkbox"/>	16.2.4	4th least important	<input type="checkbox"/>
16.1.5	5th most important	<input type="checkbox"/>	16.2.5	5th least important	<input type="checkbox"/>

1. Access to Land
2. Ownership of Land
3. Poor farm Inputs
4. Soil Fertility
5. Access to improved seed
6. Irrigation facilities
7. Access to chemical Inputs
8. Cost of Inputs
9. Extension Services
10. Access to forest resources
11. Hunting and Gathering
12. Access to potable water
13. Access to credit
14. Harvesting
15. Threshing
16. Storage
17. Processing
18. Market Information
19. Transport costs
20. Distruction by animals
21. Stealing
22. Pests and Diseases
23. Local government taxation
24. Access to off Farm Income

17.0 ANIMAL CONTRIBUTION TO CROP PRODUCTION				
17.1	Did you use Draft animals to cultivate your land during 02/03 (Yes=1, No=2) <input type="checkbox"/>			
(If no, go to question 17.2)				
S/N	Type of Draft	Number owned	Number used	Area cultivated (acres)
	(1)	(2)	(3)	(4)
17.1.1	Oxen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.1.2	Bulls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.1.3	Cows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.1.4	Donkeys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17.2	Did you apply organic fertiliser during 02/03 (Yes=1, No=2) <input type="checkbox"/>			
(If no, go to question 18)				
S/N	Type of organ Fertiliser	Area applied (acres)		
	(1)	(2)		
17.2.1	FYM	<input type="checkbox"/>	<input type="checkbox"/>	
17.2.2	Compost	<input type="checkbox"/>	<input type="checkbox"/>	

Definitions and working page for page 12

Question Specific Definitions

Crop Extension Advice (Section 15.2)

Mechanisation/LST: LST means Labour Saving Technology

Section 16.0 Livelihood constraints

16.1 List the five most important problems in order of most importance:

1. Read out the list of constraints to the respondent and ask him to select the ones that are a problem. Place a ✓ against the constraints that are a problem.
2. Read the selected constraints and ask the farmer to select 5 which create the largest problems
3. Ask the farmer to list these in order of importance and enter in column 2

16.2 List the five least important problems in order of least importance:

1. Read out the list of constraints to the respondent and ask him to select the ones that are **NOT** a problem. Place an ✗ against the constraints that are **NOT** a problem.
2. Read the selected constraints and ask the farmer to select 5 which create the least problems
3. Ask the farmer to list these in order of least importance and enter in column 2

18.0 CATTLE POPULATION, INTAKE AND OFFTAKE															
18.1 Did the household own, raise or manage any CATTLE during 2002/03 agriculture year? (Yes =1 No =2) <input type="checkbox"/>								(If no go to section 19.0)							
18.2 Cattle Population as of 1st October 2003					18.3 Cattle Intake during 2002/2003										
S/N	Cattle type <i>(1)</i>	Number of Indigenous <i>(2)</i>	Number of Improved		Total <i>(5)</i>	S/N	Number Purchased <i>(6)</i>	Number given /obtained <i>(7)</i>	Number Born <i>(8)</i>	Total Intake of Cattle <i>(9)</i>	Average Value per head <i>(10)</i>				
			Beef <i>(3)</i>	Dairy <i>(4)</i>											
18.2.1	Bulls	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.3.1	<input type="text"/>	<input type="text"/>	X X X	<input type="text"/>	<input type="text"/>				
18.2.2	Cows	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.3.2	<input type="text"/>	<input type="text"/>	X X X	<input type="text"/>	<input type="text"/>				
18.2.3	Steers	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.3.3	<input type="text"/>	<input type="text"/>	X X X	<input type="text"/>	<input type="text"/>				
18.2.4	Heifers	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.3.4	<input type="text"/>	<input type="text"/>	X X X	<input type="text"/>	<input type="text"/>				
18.2.5	Male Calves	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.3.5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>				
18.2.6	Female Calves	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.3.6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>				
Grand Total					<input type="text"/>	Total Intake					<input type="text"/>				
18.4 Cattle Offtake during 2002/2003								18.5 Cattle diseases							
S/N	Cattle type <i>(1)</i>	Number Sold/traded <i>(2)</i>	Number con sumed by hh <i>(3)</i>	Number given away/stolen <i>(4)</i>	Number died <i>(5)</i>	Total Cattle Offtake <i>(6)</i>	Average value per head <i>(7)</i>	S/N	Disease/ parasite <i>(1)</i>	Number Infected <i>(2)</i>	Number Treated <i>(3)</i>	No. Rec -overed <i>(4)</i>	Number Died <i>(5)</i>	Last vacci nated <i>(6)</i>	Main Sou -rce <i>(7)</i>
									<i>(1)</i>						
18.4.1	Bulls	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.5.1	Tick Borne diseases	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
18.4.2	Cows	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.5.2	CBPP	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
18.4.3	Steers	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.5.3	Trypanosomias s	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	X	X
18.4.4	Heifers	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.5.4	Lumpy Skin Disease	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
18.4.5	Male Calves	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.5.5	Helmenthiotis	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	X	X
18.4.6	Female Calves	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	18.5.6	FMD	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total Offtake						<input type="text"/>	<p><u>Last Vaccinated (Col 6)</u> 20031 20004 20022 before 20005 20013 Not Vaccinated...6</p> <p><u>Main Source of vaccine (Col 7)</u> Private Vet Clinic ..1 Other8 District Vet Clinic ..2 Not applicable9 NGO/Project.....3</p>								
18.6 Milk Production							<p><u>Sold to Q18.6 Col 5)</u> Neighbour.....1 Largescale farm ..5 Local Market.....2 Trader at Farm ...6 Secondary Market ...3 Did not sell7 Processing industry .4 Other8</p>								
S/N	Season <i>(1)</i>	Litres of milk/day <i>(2)</i>	No. of cattle milked/day <i>(3)</i>	Value/litre <i>(4)</i>	Sold to <i>(5)</i>	Sold/day (Litres) <i>(6)</i>									
	<i>(1)</i>														
18.6.1	Wet Season	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>									
18.6.2	Dry Season	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>									

Definitions and working page for page 13**General definitions for page 13**

Cattle Intake during 2002/03: Cattle purchased, given or born which increases the number of cattle in the herd.

Cattle Offtake during 2002/03:

Cattle removed from the herd, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 18.0)**Cattle type (Q 18.2 & 18.4, Col 1)**

Bull: Mature **Uncastrated** male cattle used for breeding

Cow: Mature female cattle that has given birth at least once

Steer: Castrated male cattle over 1 year

Heifer: Female cattle of 1 year up to the first calving

Calves: Young cattle under 1 year of age

Average Value per Head (Q 18.3, (Col 7 & 9) & 18.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Cattle vaccination (18.5 col 1)

ECF: East Coast Fever

FMD: Foot and Mouth Disease

CBPP: Contagious Bovine Pleura Pneumonia

Section 18.0 Cattle Population, Intake & Offtake.

NOTE: Section 18.1 is for the current population (as of 1st October 2003);
Section 18.2 and 18.3 is for movement in and out of the herd
during the 2002/03 agriculture year.
Section 18.4 is for diseases encountered during the agriculture year.

1. If the household has cows, you would normally expect them to have calves in column 8

2. If calves are reported in column 2, 3, or 4 (18.2.6, 18.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of cattle the importance of this must be reflected in Q 2.2.3

Section 18.5 If cattle are reported to have died in Column 5 then at least that number should be reported in 18.4 col 4

Working area for page 13

19.0 GOAT POPULATION, INTAKE AND OFFTAKE																
19.1 Did the household own, raise or manage any GOATS during the 2002/03 agriculture year? (Yes =1 No =2) <input type="checkbox"/> (If no go to section 20.0)																
19.2 Goat Population as of 1st October 2003							19.3 Goat Intake during 2002/2003									
S/N	Goat type	Number of Indigenous	Number of Improved		Total	S/N	Number Purchased	Number given /obtained	Number Born	Total Intake of Goats	Average Value per head					
	(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)					
19.2.1	Billy Goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	19.3.1	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>					
19.2.2	Castrated Goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	19.3.2	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>					
19.2.3	She Goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	19.3.3	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>					
19.2.4	Male Kid	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	19.3.4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					
19.2.5	She Kid	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	19.3.5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>					
Grand Total					<input type="text"/>	Total Intake					<input type="text"/>					
19.4 Goat Offtake during 2002/2003										19.5 Goat diseases						
S/N	Goat type	Number Sold/traded	Number consumed by hh	Number given away/stolen	Number died	Total Goat Offtake	Average value per head		S/N	Disease/parasite	Number Infected	Number Treated	No. Rec-overed	Number Died	Last vacci-nated	Main Sou-rce
	(1)	(2)	(3)	(4)	(5)	(6)	(7)			(1)	(2)	(3)	(4)	(5)	(6)	(7)
19.4.1	Male goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>									
19.4.2	Castrated Goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		19.5.1	Foot Rot	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
19.4.3	She Goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		19.5.2	CC PP	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.4.4	Male Kid	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		19.5.3	Helminthiosis	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
19.4.5	She Kid	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		19.5.4	Tetanus	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Offtake						<input type="text"/>										
19.6 Milk Production							Sold to Q19.6 Col 5) Neighbour.....1 Largescale farm ...5 Local Market.....2 Trader at Farm ...6 Secondary Market ...3 Did not sell7 Processing industry .4 Other8					Last Vaccinated (Col 6) 20031 20004 20022 before 20005 20013 Not Vaccinated...6				
S/N	Season	Litres of milk/day	No. of Goats milked/day	Value/litre	Sold to	Sold/day (Litres)										
	(1)	(2)	(3)	(4)	(5)	(6)										
19.6.1	Wet Season	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>										
19.6.2	Dry Season	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>										
							Main Source of vaccine (Col 7) Private Vet Clinic ..1 Other8 District Vet Clinic ..2 Not applicable9 NGO/Project3									

Definitions and working page for page 14**Goat definitions for page 14**

Goat Intake during 2002/03: Goat purchased, given or born which increases the number of goats in the herd.

Goat Offtake during 2002/03:

Goat removed from the herd, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 19.0)**Goat type (Q 19.2 & 19.4, Col 1)**

Billy Goat (he-goat): Mature **Uncastrated** male goat used for breeding

Castrated goat: Male goat that has been castrated.

She Goat: Mature female goat over 9 months of age

Kid: Young goat under 9 months of age.

Average Value per Head (Q 19.3, (Col 7 & 9) & 19.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Goat vaccination (19.5 col 1)

FMD: Foot and Mouth Disease

CCPP: Contagious Caprine Pleura Pneumonia

LSD: Lumpy Skin Disease

Section 19.0 Goat Population, Intake & Offtake.

NOTE: Section 19.1 is for the current population (as of 1st October 2003); Section 19.2 and 18.3 is for movement in and out of the herd during the 2002/03 agriculture year. Section 19.4 is for diseases encountered during the agriculture year.

1. If the household has she goats, you would normally expect them to have kids in column 8
2. If kids are reported in column 2, 3, or 4 (19.2.6, 19.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of goats the importance of this must be reflected in Q 2.2.3

Section 19.5 If goats are reported to have died in Column 5 then at least that number should be reported in 19.4 col 4

Working area for page 14

20.0 SHEEP POPULATION, INTAKE AND OFFTAKE																				
20.1 Did the household own, raise or manage any SHEEP during the 2002/03 agriculture year? (Yes =1 No =2)											<input type="checkbox"/>									
20.2 Sheep Population as of 1st October 2003											20.3 Sheep Intake during 2002/2003									
S/N	Sheep type	Number of Indigenous	Number of Improved		Total	S/N	Number Purchased	Number given /obtained	Number Born	Total Intake of Sheep	Average Value per head									
	(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)									
20.2.1	Ram	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	20.3.1	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>									
20.2.2	Castrated Sheep	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	20.3.2	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>									
20.2.3	She Sheep	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	20.3.3	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>									
20.2.4	Male lamb	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	20.3.4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>									
20.2.5	She lamb	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	20.3.5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>									
Grand Total					<input type="text"/>						<input type="text"/>									
20.4 Sheep Offtake during 2002/2003							20.5 Sheep diseases													
S/N	Sheep type	Number Sold/traded	Number consumed by hh	Number given away/stolen	Number died	Total Sheep Offtake	Average value per head	S/N	Disease/parasite	Number Infected	Number Treated	No. Rec- overed	Number Died	Last vacci- nated	Main Sou- rce					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		(1)	(2)	(3)	(4)	(5)	(6)	(7)					
20.4.1	Ram	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>													
20.4.2	Castrated Sheep	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	20.5.1	Foot Rot	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
20.4.3	She Sheep	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	20.5.2	CC PP	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>					
20.4.4	Male lamb	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	20.5.3	Helminthiosis	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
20.4.5	She lamb	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	20.5.4	Trypa nsomiasis	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Total Offtake						<input type="text"/>							20.5.5	FMD	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
											<p>Last Vaccinated (Col 6) 20031 20004 20022 before 20005 20013 Not Vaccinated...6</p> <p>Main Source of vaccine (Col 7) Private Vet Clinic ..1 Other8 District Vet Clinic ..2 Not applicable9 NGO/Project.....3</p>									

Definitions and working page for page 15**Sheep definitions for page 15**

Sheep Intake during 2002/03: Sheep purchased, given or born which increases the number of Sheep in the herd.

Sheep Offtake during 2002/03:
Sheep removed from the herd, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 20.0)**Sheep type (Q 20.2 & 20.4, Col 1)**

Ram: Mature **Uncastrated** male goat used for breeding

Castrated sheep: Male sheep that has been castrated.

Ewe: Mature female sheep over 9 months of age

Lamb: Young sheep under 9 months of age.

Average Value per Head (Q 20.3, (Col 7 & 9) & 20.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Sheep vaccination (20.5 col 1)

FMD: Foot and Mouth Disease

CCPP: Contagious Caprine Pleura Pneumonia

Section 20.0 Sheep Population, Intake & Offtake.

NOTE: Section 20.1 is for the current population (as of 1st October 2003);
Section 20.2 and 20.3 is for movement in and out of the herd during the 2002/03 agriculture year.
Section 20.4 is for diseases encountered during the agriculture year.

1. If the household has ewes, you would normally expect them to have kids in column 8
2. If lambs are reported in column 2, 3, or 4 (20.2.6, 20.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of Sheep the importance of this must be reflected in Q 2.2.3

Section 20.5 If Sheep are reported to have died in Column 5 then at least that number should be reported in 20.4 col 4

Working area for page 15

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21.0 PIG POPULATION AND PRODUCTION																
21.1		Did the household own, raise or manage any PIGS during the 2002/03 agriculture year (Yes =1 No =2) <input type="checkbox"/>													(If no go to section 22.0)	
21.2 PIG Population as of 1 st October 2003							21.3 Pig increase during 2002/2003									
S/N	Pig type	Number		S/N	Number Purchased	Number given /obtained	Number Born	Total Pig Increase	Average Value per head							
	(1)	(2)			(3)	(4)	(5)	(9)	(10)							
21.2.1	Boar	<input type="text"/>		21.3.1	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>							
21.2.2	Castrated male	<input type="text"/>		21.3.2	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>							
21.2.3	Sow/Gilt	<input type="text"/>		21.3.3	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>							
21.2.4	Male piglet	<input type="text"/>		21.3.4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
21.2.5	She piglet	<input type="text"/>		21.3.5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
Grand Total		<input type="text"/>		<input type="text"/>												
21.4 Pig decrease during 2002/2003								21.5 Pig diseases/pests/conditions								
S/N	Pig type	Number Sold/traded	Number consumed by hh	Number given away/stolen	Number died	Total Pig Offtake	Average value per head	S/N	Disease/parasite	Number Infected	Number Treated	No. Rec-overed	Number Died	Last vacci-nated	Main Sou-rce	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		(1)	(2)	(3)	(4)	(5)	(6)	(7)	
21.4.1	Boar	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>									
21.4.2	Castrated male	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	21.5.1	Anthrax	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21.4.3	Sow/Gilt	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	21.5.2	ASF	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21.4.4	Male piglet	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	21.5.3	Anemia	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
21.4.5	She piglet	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	21.5.4	Helmenthiosis	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Total Offtake						<input type="text"/>										
22.0 LIVESTOCK PEST & PARASITE CONTROL							22.3 Do you normally encounter a tick problem (Yes=1, No=2) <input type="checkbox"/>		<div style="border: 1px solid black; padding: 5px;"> Last Vaccinated (Col 6) 2003 ..1 20004 2002 ..2 before 20005 2001 ..3 Not Vaccinated.6 </div>							
22.1 Did you deworm your animals during 2002/03 (Yes=1, No=2) <input type="checkbox"/>		(If the response is 'NO' go to section 22.3)					22.4 Which methods of tick control did you use <input type="checkbox"/>									
							<div style="border: 1px solid black; padding: 2px;"> Control method (Q 22.4) None..1 Spraying ..2 Dipping..3 Smearing ..4 Other .8 </div>		<div style="border: 1px solid black; padding: 5px;"> Main Source (Col 7) Private Vet Clinic ..1 District Vet Clinic ..2 NGO/Project.....3 Other8 Not applicable9 </div>							
22.2 Which animals did you deworm ? (Tick appropriate boxes) Cattle <input type="checkbox"/> Goats <input type="checkbox"/> Sheep <input type="checkbox"/> Pigs <input type="checkbox"/>							22.5 Do you normally encounter a tsetse fly problem (Y=1, N=2) <input type="checkbox"/>									
							<div style="border: 1px solid black; padding: 2px;"> Control method (Q22.6) None .1 Spray .2 Dipping .3 Trapping .4 Other .8 </div>									

Definitions and working page for page 16**Pigs definitions for page 16**

Pig Intake during 2002/03: Pigs purchased, given or born which increases the number of Pigs in the production unit.

Pig Offtake during 2002/03:

Pigs removed from the production unit, either by selling, hh consumption, given away or stolen.

Question Specific Definitions (Section 21.0)**Pigs type (Q 21.2 & 21.4, Col 1)**

Boar: Mature **Uncastrated** male pig used for breeding

Castrated Pig: Male pig that has been castrated.

Sow: Mature female pig that has given birth to at least one litter of pigs.

Gilt: Female pig of 9 months up to the first farrowing.

Piglet: Young pig under 3 months of age.

Average Value per Head (Q 21.3, (Col 7 & 9) & 21.4 (Col 3, 5 & 7))

In these columns give the average value per head during 2002/03. For given, traded, consumed by the hh & given away/stolen estimate the value.

Pig vaccination (21.5 col 1)

ASF: African Swine Fever

Section 21.0 Pig Population, Intake & Offtake.

NOTE: Section 21.1 is for the current population (as of 1st October 2003); Section 21.2 and 21.3 is for movement in and out of the herd during the 2002/03 agriculture year. Section 21.4 is for diseases encountered during the agriculture year.

1. If the household has sows, you would normally expect them to have piglets in column 8
2. If piglets are reported in column 2, 3, or 4 (20.2.6, 20.2.5) then there must be at least that number repeated in column 8

Note: If the farmer reports sales of Pigs the importance of this must be reflected in Q 2.2.3

Section 20.5 If Pigs are reported to have died in Column 5 then at least that number should be reported in 20.4 col 4

Working area for page 16

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23.0 Other Livestock currently available and details of consumption and sales during the last 12 months																
	Animal type	Current			Sold during 2002/03		Consumed during 2002/03									
		Number			Number	Average Value/head	Number	Average Value/head								
		(1)	(2)	(3)	(4)	(5)	(6)	(7)								
23.1	Indigenous Chicken	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>								
23.2	Layer	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>								
23.3	Broiler	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>								
23.4	Ducks	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>								
23.5	Turkeys	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>								
23.6	Rabbits	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>								
23.7	Donkeys	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>								
23.8	Horses	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	X X X	X X X X X								
23.9	Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>								
24.0	CHICKEN DISEASES	Number infected		Number Treated		Number Died		Number Recovered								
24.1	Newcastle Disease	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
24.2	Gumboro	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
24.3	Coccidiosis	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
24.4	Chorysa	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
24.5	Fowl typhoid	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
25.0	LIVESTOCK PRODUCT	Sold during 2002/03				Consumed/utilised during 2002/03										
		Number			Average Value/unit		Number		Average Value/unit							
25.1	Eggs	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	X	<input type="text"/>	<input type="text"/>	<input type="text"/>							
25.2	Hides	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
25.3	Skins	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
26.0	List in order of importance the outlets for the sale of Livestock						27.0 Access to functional Livestock structures /accessories									
S/N	Impo-rtance of outlet	Outlets for Cattle	Out-lets for Goat	Outlets for Sheep	Outl-ets for Pigs	Outlets for Chick-ens	S/N	Type of structure/accessory	Source of Structure	Distance to struct-ure (Km)						
								(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)
								27.1	Cattle Dip	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
27.2	Spray Race	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.3	Hand powered sprayer	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.4	Cattle crush	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.5	Primary Market	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.6	Secondary Market	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.7	Abattoir	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.8	Slaughter Slab	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.9	Hide/skin shed	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.10	Input supply	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.11	Veterinary Clinic	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.12	Village holding ground	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.13	village watering point/dam	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							
27.14	Drencher	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							

Outlet code (Col 2, 3, 4 & 5)

Trader at farm1 Abattoir/factory.....5
 Local Market2 Another farmer6
 Secondary market/auction.....3 Other (Specify).....8
 Neighbour4

Source of structure (Q27.0 - Col 2)

Owns1 NGO6
 Cooperative2 Large scale farm7
 Local farmers association3 Other8
 Gov extension/veterinary4 Not applicable9
 Development project5

Definition and working page for page 17**Question Specific Definitions Section 26.0)****Procedures for questions****Section 23.0 - Other Livestock:**

1. The current number includes both adult and young animals. For example The number of chickens in col 1 would include adults and chicks.

Question Specific Definitions Section 27.0)**Access to functional Livestock Structures/accessories (Section 27.0):**

NOTE: The structures must be functional. If they are not working/derelect then they should not be included. The distance to the next nearest functional structure should be taken.

Spray Race: A fixed spray structure on an animal race for spraying acaricide

Cattle crush: Corridor structure for restraining cattle.

Abattoir: Large building designed for slaughtering a large amount of animals. It normally has complex structures to assist in the slaughter and storage and a high level of hygiene is maintained.

Slaughter Slab: Concrete slab designed for slaughtering a small amount of animals

Hides: obtained from Cattle

Skins: Obtained from sheep and goats

Hide/Skin Shed: Shed for curing/tanning animal skins and hides

Village holding Pen: Enclosure for containing large amount of livestock which is owned communally.

Drencher: Device for orally administering medicine to livestock. If no product was sold in 2002 enter "0" in columns 6, 7 & 9.

Section 26.0 - Outlets for livestock:

Using the codes enter the outlets for the sale of different livestock in order of importance. If there are, for example, only 2 outlets mark the rest with a "X".

28.0 FISH FARMING

28.1 Was **Fish farming** carried out by this household during 2002/2003? (Yes =1, No=2) (If the response is 'NO' go to section 29.0)

28.2 Specify details of **fish farming practices**

S/N	Product ion unit number	Fish farming system	Size of unit/pond (m2)	Source of fingerling	frequency of stocking (No/year)	Number of stocked fish			Number of fish harvested	weight of fish harvested	weight of fish sold	Mainly sold to
						Tilapia	Carp	Other				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
28.1.1	1	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
28.1.2	2	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
28.1.3	3	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Farming System (Col 2)
 Natural Pond...1 Natural Lake...3 Other...8
 Dug out pond...2 Water reservoir...4

Source of fingerlings (Col 4)
 Own pond...1 NGO/Project...3 Private trader...5
 Government Institution...2 Neighbour...4 Other...8

Mainly sold to (Col 12)
 Neighbour...1 Secondary Market...3 Large scale farm...5 Did not sell...7
 Local Market...2 Processing industry...4 Trader at Farm...6 Other...8

29.0 LIVESTOCK EXTENSION

29.1 Did you receive **livestock extension advice** during 02/03 (Yes=1, No=2) (If the response is 'NO' go to section 30.0)

S/N	Livestock Extension Message	Received Advice Yes=1, No=2	Adopted Yes=1 No=2	Source of Livestock Extension
	(1)	(2)	(3)	(4)
29.1.1	Feed and Proper feeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.1.2	Housing (Goat, Dairy, Poultry, Pigs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.1.3	Proper Milking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.1.4	Milk Hygiene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.1.5	Disease control (dipping/spraying)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.1.6	Herd/Flock size and selection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.1.7	Pasture Establishment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.1.8	Group formation and strengthening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.1.9	Calf rearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.1.10	Use of improved bulls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.1.11	Other livestock extension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Source of livestock extension (Col 4)
 Government...1 NGO/Dev project...2 Cooperative...3 Large scale farmer...4 Other (Specify)...8

29.2 For the following **Livestock Extension Service Providers** give details

S/N	Extension Provider	If you pay for extension, what is the cost/yr	Contact farmer/group member (Y=1, N=2)	No. of visits by extension agency/year	No. of messages adopted in the last 3 yrs	Quality of Service
	(1)	(2)	(3)	(4)	(5)	(6)
29.2.1	Government	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
29.2.2	NGO/dev project	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
29.2.3	Cooperative	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
29.2.4	Large Scale farmer	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
29.2.5	Other.....	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Quality of service (Col 6) Very good...1 good...2 Average...3 Poor...4 No Good...5

30.0 GOVERNMENT REGULATORY PROBLEMS

31.1 Did you face problems with government regulations during 2002/03 (Y=1, N=2) (If the response is no go to section 31.0)

	Problem code	Problem code
30.1.1	1st	Land ownership by government...1 Restriction of sale between regions...2
30.1.2	2nd	Import of food items...3
30.1.3	3rd	Other (specify)...8

Definitions and working page for page 18**General definitions for Section 28.0**

Fish farming: Refers to the rearing/production of fish. It is different to fishing in that the fish have to be reared and fed in fish farming. Fishing traps or captures naturally occurring fish in rivers, lakes and the sea and should not be included in this section.

Question Specific Definitions (Section 28.2)

Production unit number (Col 1): A production unit is a pond river/lake which is treated as a separate entity for the production of fish eg it may be by virtue of manageable size, maturity of fish, type of fish etc. Eg a farmer may have 3 fish ponds. (each one is a separate production unit).

Frequency of stocking (Col 5): What is the number of times the farmer puts new fingerlings into the pond each year.

Fingerlings: These are young immature fish used for stocking ponds.

Sold: (Col 10 & 11)

If no fish were sold enter "0" in column 10 and 11)

Livestock Extension Services (Section 29.1)

Adopted (Col 3): This is the uptake of an intervention for 2 or more years

Livestock Extension Service providers (Section 29.2)

Contact Farmer: A farmer who is used by the extension services as a focal point to demonstrate new interventions to. The contact farmer then passes on the message to other farmers

Adopted (Col 5): This is the uptake of an intervention for 2 or more years

Working area for page 18

31.0 LABOUR USE				32.0 SUBSISTENCE vs NON-SUBSISTENCE																																																					
31.1 Who is mainly responsible for undertaking the following tasks:				32.1 Indicate if any members of the household was involved in the following activities and assess the percentage used for subsistence/consumption by the household:																																																					
S/N	Activity	Tick if carried out by hh	Main responsibility	S/N	Activity	Tick if hh was involved in activity	Estimate % used for subsistence	Estimate % used for non subsistence	Check Total																																																
	(1)	(2)	(3)		(1)	(2)	(3)	(4)	(5)																																																
31.1.1	Land Clearing	<input type="checkbox"/>	<input type="checkbox"/>	32.1.1	Crop production	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.2	Soil preparation (by hand)	<input type="checkbox"/>	<input type="checkbox"/>	32.1.2	Livestock production	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.3	Soil preparation (oxen/tractor)	<input type="checkbox"/>	<input type="checkbox"/>	32.1.3	Vegetable production	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.4	Planting	<input type="checkbox"/>	<input type="checkbox"/>	32.1.4	Tree cutting for firewood	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.5	Weeding	<input type="checkbox"/>	<input type="checkbox"/>	32.1.5	Tree logging for poles	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.6	Crop Protection	<input type="checkbox"/>	<input type="checkbox"/>	32.1.6	Tree logging for timber	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.7	Harvesting	<input type="checkbox"/>	<input type="checkbox"/>	32.1.7	Tree logging for charcoal	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.8	Crop processing	<input type="checkbox"/>	<input type="checkbox"/>	32.1.8	fishing	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.9	Crop marketing	<input type="checkbox"/>	<input type="checkbox"/>	32.1.9	bee keeping	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.10	Cattle rearing/husbandry	<input type="checkbox"/>	<input type="checkbox"/>	32.1.10	employment/off farm	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.11	Cattle herding	<input type="checkbox"/>	<input type="checkbox"/>	32.1.11	employment/off farm	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.12	Cattle marketing	<input type="checkbox"/>	<input type="checkbox"/>	32.1.12	Remittances	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																
31.1.13	Goat/sheep rearing/husbandry	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.14	Goat and sheep herding	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.15	Goat and sheep marketing	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.16	Milking	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.17	Pig rearing/husbandry	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.18	Poultry keeping	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.19	Collecting Water	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.20	Collecting Firewood	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.21	Pole cutting	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.22	Timber wood cutting	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.23	Building/maintaining house	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.24	Making Beer	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.25	Bee keeping	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.26	Fishing	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.27	Fish farming	<input type="checkbox"/>	<input type="checkbox"/>																																																						
31.1.28	Off-farm income generation	<input type="checkbox"/>	<input type="checkbox"/>																																																						
Responsibility (Col 3) HH head alone1 Girls6 Adult Males2 Boys & Girls7 Adult Females.....3 All household members.....8 Adults.....4 Hired labour9 boys 5				33.0 ACCESS TO INFRASTRUCTURE & OTHER SERVICES																																																					
				<table border="1"> <thead> <tr> <th>S/N</th> <th>Type of service</th> <th>Distance in Km</th> <th>S/N</th> <th>Type of service</th> <th>Distance in Km</th> </tr> <tr> <td></td> <td>(1)</td> <td>(2)</td> <td></td> <td>(1)</td> <td>(2)</td> </tr> </thead> <tbody> <tr><td>33.1</td><td>Primary School</td><td><input type="text"/></td><td>32.7</td><td>Feeder Road</td><td><input type="text"/></td></tr> <tr><td>33.2</td><td>Secondary School</td><td><input type="text"/></td><td>32.8</td><td>All weather road</td><td><input type="text"/></td></tr> <tr><td>33.3</td><td>Health Clinic</td><td><input type="text"/></td><td>32.9</td><td>Tarmac road</td><td><input type="text"/></td></tr> <tr><td>33.4</td><td>Hospital</td><td><input type="text"/></td><td>32.10</td><td>Primary market</td><td><input type="text"/></td></tr> <tr><td>33.5</td><td>District Capital</td><td><input type="text"/></td><td>32.11</td><td>Secondary market</td><td><input type="text"/></td></tr> <tr><td>33.6</td><td>Regional Capital</td><td><input type="text"/></td><td>32.12</td><td>Tertiary market</td><td><input type="text"/></td></tr> </tbody> </table>						S/N	Type of service	Distance in Km	S/N	Type of service	Distance in Km		(1)	(2)		(1)	(2)	33.1	Primary School	<input type="text"/>	32.7	Feeder Road	<input type="text"/>	33.2	Secondary School	<input type="text"/>	32.8	All weather road	<input type="text"/>	33.3	Health Clinic	<input type="text"/>	32.9	Tarmac road	<input type="text"/>	33.4	Hospital	<input type="text"/>	32.10	Primary market	<input type="text"/>	33.5	District Capital	<input type="text"/>	32.11	Secondary market	<input type="text"/>	33.6	Regional Capital	<input type="text"/>	32.12	Tertiary market	<input type="text"/>
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33.18	Livestock Dev Centre	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																					
Satisfied with service (Col 4) Very good1 Average.....3 No good5 Good2 Poor4 Not applicable 9																																																									

Definition and working page for page 19**Question specific definitions (Section 31.1)****Activity (Col 1):**

Land Clearing: Refers to removing trees/bush/grass prior to ploughing

Soil Preparation: Refers to the seedbed preparation (ploughing, harrowing, etc).

Cattle Rearing: Tending to cattle at home, eg assisting with births, castration, etc. Different livestock keeping activity to herding.

Cattle Herding: Moving livestock from place to place for grazing and water. If herding is carried out the respondent must also give a response to rearing/husbandry

Question Specific Definitions (Section 32.0.0)**Activity (Col 1):**

Subsistence: For the family's survival, rather than for the generation of cash. This includes feeding the hh, provision of water and fuel for cooking. The source of these products are usually from the land resources available to the family. Remember that not all cash earnings are for non subsistence purposes/activities as cash can be used to purchase subsistence items eg food.

Non -subsistence: Cash used for items and activities which are not crucial for the survival of the family. This includes modern medication, non working clothes, refined beer, school fees, etc.

Procedures for (Section 31.1)**Section 31.1 ((Labour use)**

1. For each listed activity in column 1, place a tick in column 2 if any member of the household was involved in that activity during the 2002/03 agriculture year.
2. After completing column 2 return to the first activity in row 27.1.1 and complete column 3.
3. Make sure you stress MAINLY responsible.

NOTE: If an activity has been mentioned previously in the questionnaire eg that the hh keeps chickens, make sure a response is obtained in the appropriate place ie poultry keeping.

If off-farm income generation is mentioned, check for responses to off farm income in other parts of the questionnaire

Section 32.0 - Subsistence vs Non-subsistence

1. For each listed activity in column 1, place a tick in column 2 if any member of the household was involved in that activity during the 2002/03 agriculture year.
2. After completing column 2 return to the first activity in row 32.1.1 and complete column 3 & 4. For each activity make an assessment of the percentage used for subsistence survival and the percent converted to cash for non subsistence goods and items.
3. Make sure you stress MAINLY responsible.

NOTE: Cross check the responses with previous sections in the questionnaire. eg if a response is given to remittances check for an entry in question 2.2.5

34.0 HOUSEHOLD FACILITIES																															
34.1	House Construction	34.2 Household assets																													
<p>For the main dwelling, what are the main building materials used in the construction of the following</p> <p>34.1.1: Roof <input type="checkbox"/> 34.1.2 Number of rooms <input type="checkbox"/><input type="checkbox"/></p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Roof Material</p> <p>Iron Sheets.....1 Tiles2 Concrete3 Asbestos4 Grass/leaves.....5 Grass & mud.....6 Other (Specify) 8</p> </div>		<p>Does your household own the following?</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">Asset</th> <th style="width: 20%;">Y=1 N=2</th> </tr> </thead> <tbody> <tr><td>34.2. Radio/cassette, music system)</td><td><input type="checkbox"/></td></tr> <tr><td>34.2. Telephone (landline)</td><td><input type="checkbox"/></td></tr> <tr><td>34.2. Telephone (mobile)</td><td><input type="checkbox"/></td></tr> <tr><td>34.2. Iron</td><td><input type="checkbox"/></td></tr> <tr><td>34.2. Wheelbarrow</td><td><input type="checkbox"/></td></tr> <tr><td>34.2. Bicycle</td><td><input type="checkbox"/></td></tr> <tr><td>34.2. Vehicle</td><td><input type="checkbox"/></td></tr> <tr><td>34.2. Television</td><td><input type="checkbox"/></td></tr> </tbody> </table>		Asset	Y=1 N=2	34.2. Radio/cassette, music system)	<input type="checkbox"/>	34.2. Telephone (landline)	<input type="checkbox"/>	34.2. Telephone (mobile)	<input type="checkbox"/>	34.2. Iron	<input type="checkbox"/>	34.2. Wheelbarrow	<input type="checkbox"/>	34.2. Bicycle	<input type="checkbox"/>	34.2. Vehicle	<input type="checkbox"/>	34.2. Television	<input type="checkbox"/>										
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<p>Energy use and access by the household</p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th colspan="4" style="text-align: center;">Main Source of energy for</th> </tr> <tr> <th style="width: 30%;">Lighting</th> <th style="width: 10%;"></th> <th style="width: 30%;">Cooking</th> <th style="width: 30%;"></th> </tr> </thead> <tbody> <tr> <td>34.3.1 <input type="checkbox"/><input type="checkbox"/></td> <td></td> <td><input type="checkbox"/><input type="checkbox"/></td> <td></td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="border: 1px solid black; padding: 5px; width: 48%;"> <p>Lighting energy</p> <p>Mains electricity.....01 Solar02 Gas (biogas)03 Hurricane Lamp04 Pressure Lamp05 Wick Lamp06 Candles07 Firewood08 Other (specify) 98</p> </div> <div style="border: 1px solid black; padding: 5px; width: 48%;"> <p>Cooking energy</p> <p>Mains electricity.....01 Solar02 Gas (hh biogas)03 Bottled gas04 Paraffin/kerocine.....05 Charcoal.....06 Firewood07 Crop Residues08 Livestock dung09 Other (specify)98</p> </div> </div>		Main Source of energy for				Lighting		Cooking		34.3.1 <input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>		<table border="1" style="width:100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th style="width: 15%;">Season</th> <th style="width: 20%;">Main source of drinking water</th> <th style="width: 20%;">Distance to source (in km)</th> <th style="width: 45%;">Time to and from source (Hour : minute)</th> </tr> <tr> <th>(1)</th> <th>(2)</th> <th>(3)</th> <th>(4)</th> </tr> </thead> <tbody> <tr> <td>34.4. Wet Season</td> <td><input type="checkbox"/><input type="checkbox"/></td> <td><input type="checkbox"/><input type="checkbox"/> · <input type="checkbox"/></td> <td><input type="checkbox"/><input type="checkbox"/> : <input type="checkbox"/><input type="checkbox"/></td> </tr> <tr> <td>34.4. Dry Season</td> <td><input type="checkbox"/><input type="checkbox"/></td> <td><input type="checkbox"/><input type="checkbox"/> · <input type="checkbox"/></td> <td><input type="checkbox"/><input type="checkbox"/> : <input type="checkbox"/><input type="checkbox"/></td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Main Source of drinking water</p> <p>Piped water01 Covered rainwater catchment ...07 Protected well02 Uncovered rainwater catchment 08 Protected/covered spring03 Water Vendor09 Unprotected Well04 Tanker truck10 Unprotected spring05 Bottled water11 Surface water (lake/dam/river/stream)06 Other (Specify)98</p> </div>		Season	Main source of drinking water	Distance to source (in km)	Time to and from source (Hour : minute)	(1)	(2)	(3)	(4)	34.4. Wet Season	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> · <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> : <input type="checkbox"/> <input type="checkbox"/>	34.4. Dry Season	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> · <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> : <input type="checkbox"/> <input type="checkbox"/>
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34.5	Access to toilet facilities	34.6 Food consumption patterns																													
<p>34.5.1 What type of toilet does your hh use <input type="checkbox"/></p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Type of toilet</p> <p>No toilet/bush.....1 Improved pit latrine - hh owned.....4 Flush toilet2 Other type (specify)5 Pit latrine - traditional ..3</p> </div>		<table border="1" style="width:100%; border-collapse: collapse; margin-top: 5px;"> <tbody> <tr> <td style="width: 80%;">34.6. Number of meals the hh normally has per day</td> <td style="width: 20%;"><input type="checkbox"/></td> </tr> <tr> <td>34.6. Number of days hh consumed meat last w</td> <td><input type="checkbox"/></td> </tr> <tr> <td>34.6. How often did the hh have problems in satisfying the food needs of the hh last year?</td> <td><input type="checkbox"/></td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Problems satisfying hh food needs (row 34.6.3)</p> <p>Never1 Seldom2 Sometimes3 Often4 Always5</p> </div>		34.6. Number of meals the hh normally has per day	<input type="checkbox"/>	34.6. Number of days hh consumed meat last w	<input type="checkbox"/>	34.6. How often did the hh have problems in satisfying the food needs of the hh last year?	<input type="checkbox"/>																						
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34.7	Source of Household income																														
<p>34.7.1 What is the households main source of cash income? <input type="checkbox"/><input type="checkbox"/></p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Source of Income codes</p> <p>Sale of food crops01 Wages or salaries in cash07 Sale of Livestock.....02 Other casual cash earnings ..08 Sale of livestock products ...03 Cash remittances09 Sale of cash crops.....04 Fishing10 Sale of forest products05 Other98 Business income.....06 Not applicable99</p> </div>																															

Definition and working page for page 20**Household facilities (Section 34):****Number of rooms used for sleeping in the household (Q 34.1)**

Include sitting room, dining room, kitchen, etc if used for sleeping. It also includes rooms outside the main dwelling

A room is defined as a space which is separate from the rest of the building by a permanent wall or division. A building/house that is not divided into rooms is considered to have one room.

Household assets (Q 34.2): these assets must be functioning. Do not include if broken.

Access to drinking water (Q 34.4): If there is more than one source, use the one, which the hh uses most frequently.

Main source of hh cash income:

Activity that provides the hh with the most cash during 2002/03 agriculture year.

Average/maximum yields						Use this table to compare the yields calculated in sections 7.1, 7.2, and 7.3. They are STRICTLY to be used as guidelines only and the sole purpose is to assist in getting the correct area and harvest for each crop					
Crop Name	kg/ha		kg/acre		Crop Name	kg/ha		kg/acre			
	Average	Max	Average	Max		Average	Max	Average	Max		
11 Maize	1200	6250	486	2530	86 Cabbage			0	0		
12 Paddy	700	4000	283	1619	87 Tomatoes			0	0		
13 Sorghum	750	3500	304	1417	88 Spinach			0	0		
14 Bulrush Millet	350	3000	142	1215	89 Carrot			0	0		
15 Finger Millet	300	2500	121	1012	90 Chillies			0	0		
16 Wheat	1200	4500	486	1822	91 Amaranths			0	0		
17 Barley	1400	2300	567	931	92 Pumpkins			0	0		
21 Cassava	3000	7000	1215	2834	93 Cucumber			0	0		
22 Sweet Potato	600	8000	243	3239	94 Egg Plant			0	0		
23 Irish potatoes	750	8500	304	3441	95 Water Mellon			0	0		
24 Yams	4000	10000	1619	4049	96 Cauliflower			0	0		
25 Cocoyams	2500	5000	1012	2024	52 Sisal	800	25000	324	10121		
26 Onions			0	0	54 Coffee	500	100	202	40		
27 Ginger			0	0	55 Tea	2500	10000	1012	4049		
31 Beans	400	1300	162	526	56 Cacao	200	1000	81	405		
32 Cowpeas	300	1750	121	709	57 Rubber	400	1400	162	567		
33 Green gram			0	0	58 Wattle			0	0		
34 Pigeon pea	600	2000	243	810	59 Kapok			0	0		
35 Chick peas	500	1500	202	607	60 Sugar Cane	60000	150000	24291	60729		
36 Bambara nut	600	4000	243	1619	61 Cardamom			0	0		
41 Sunflower	600	1700	243	688	71 Banana	10000	50000	4049	20243		
42 Simsim	300	1000	121	405	72 Avocado			0	0		
43 Groundnut	600	4000	243	1619	73 Mangoes	10000	25000	4049	10121		
47 Soyabeans	1300	2500	526	1012	74 Papaw	50000	70000	20243	28340		
48 Caster seed	300	750	121	304	76 Orange	20000	40000	8097	16194		
75 Pineapple	25000	60000	10121	24291	77 Grape fruit	30000	50000	12146	20243		
50 Cotton	300	1500	121	607	78 Grapes	5000	30000	2024	12146		
51 Tobacco	500	2000	202	810	79 Mandarin/tange	20000	40000	8097	16194		
53 Pyrethrum			0	0	80 Guava	7000	35000	2834	14170		
62 Jute	800	3500	324	1417	81 Plums			0	0		
44 Palm Oil	1200	5000	486	2024	82 Apples			0	0		
45 Coconut	2000	8000	810	3239	83 Pears			0	0		
46 Cashewnut	9	60/tree	4	24	84 Pitches			0	0		

Back Page Reference material

This page contains reference information that may be required to complete some of the questions in the questionnaire.

Weights and measures

1 hectare = 10,000 sq metres (100 x 100 metres)
 1 kilometre = 1000 metres
 1 acre = 4840 square yards (110 x 44 yards)

Conversions

1 hectare = 2.47 acres
 1 mile = 1.61 Kilometres

Kg equivalents

The following standards may be used as a guide to obtain kg if the reported unit is different. Only use these conversions if the respondent is unable to provide weights in kgs.

	Crop Name	Number of Kgs			
		Standard		Non-standard	
		Bag	Tin	Name	kgs
11	Maize	100	18	Rumbesi	140
12	Paddy	75	15		
13	Sorghum	100	18		
14	Bulrush Millet	100	18		
15	Finger Millet	120	20		
16	Wheat	75	15		
17	Barley	75	15		
21	Cassava	60	12		
22	Sweet Potatoe	80	16		
23	Irish potatoes	80	16		
24	Yams	80	16		
25	Cocoyams	80	16		
26	Onions	80	16		
27	Ginger	75	15		
31	Beans	100	20		
32	Cowpeas	100	20		
33	Green ram	100	20		
34	Pigeon pea	100	20		
35	Chick peas	100	20		
36	Bambara nut	100	20		
41	Sunflower	60	12		
42	Simsim	100	20		
43	Groundnut	50	10		
47	Soyabeans	100	20		
48	Caster seed	100	20		
75	Pineapple	90	18		
50	Cotton	50	10		
51	Tobacco	70	14		
53	Pyrethrum	60	12		
62	Jute	50	10		
44	Palm Oil	100			
45	Coconut	75			
46	Cashewnut	80			

	Crop Name	Number of Kgs			
		Standard		Non-standard	
		Bag	Tin	Name	kgs
86	Cabbage	50			
87	Tomatoes	90			
88	Spinach	45			
89	Carrot	110			
90	Chillies	85			
91	Amaranths	50			
92	Pumpkins	60			
93	Cucumber	80			
94	Egg Plant	70			
95	Water Mellon	80			
96	Cauliflower	50			
52	Sisal	130			
54	Coffee	55			
55	Tea	60			
56	Cacao	60			
57	Rubber				
58	Wattle	90			
59	Kapok				
60	Sugar Cane	120			
61	Cardamom	100			
71	Banana	120			
72	Avocado	140			
73	Mangoes	130			
74	Papaw	100			
76	Orange	130			
77	Grape fruit	120			
78	Grapes	80			
79	Mandarin/tange	110			
80	Guava	110			
81	Plums	110			
82	Apples	110			
83	Pears	110			
84	Pitches	110			

For official use only:

If a question has a query, an indication will be made by the supervisor/data entry controller on the front page of the questionnaire. This space is to note what and where the problem is, the action required to be taken and the responsible person to take follow up action.

Nature of the problem:

Action Required: National supervisor action

Field supervisor action

Overall Status: Does not affect overall integrity of the questionnaire.
 More data is required before it can be used

Discard and resample
 Discard as missing data